

Agua Fria National Monument: Record of Decision Approved Resource Management Plan

April 22, 2010

Table of Contents

Dear Reader Letter	xiii
1. Record of Decision	1
1.1. Introduction	1
1.2. Overview of the Alternatives	1
1.2.1. Alternative A: (No Action Alternative)	1
1.2.2. Alternative B: Management for Increased Recreational Use	2
1.2.3. Alternative C: Management for Use and Landscape Protection	2
1.2.4. Alternative D: Management for Primitive Landscape Protection	2
1.2.5. Alternative E: Management for Resource Sustainability and Consistent Uses (Proposed Plan)	2
1.3. Results of Protest Review	3
1.4. The Decision	4
1.4.1. What the Decision/Approved RMP Provides	4
1.4.2. What the Decision/Approved RMP Does Not Provide	7
1.4.3. Implementation Decisions	7
1.4.3.1. Appeal Procedures for Implementation Decisions	7
1.4.4. Modifications and Clarifications	9
1.5. Management Considerations for Selecting the Approved Plan	10
1.6. Mitigation Measures	11
1.7. Plan Monitoring	11
1.7.1. Implementation Monitoring	12
1.7.2. Effectiveness Monitoring	12
1.8. Implementation of the Management Plan	12
1.9. Public Involvement	13
1.10. Availability of the Plan	13
1.11. Field Manager Recommendation	14
1.12. District Manager Concurrence	14
1.13. State Director Approval	14
2. Approved Resource Management Plan	15
2.1. Introduction	17
2.1.1. Purpose and Need	17
2.1.2. Planning Area Description	18
2.1.3. Scoping Issues	19
2.1.4. Issues Addressed	19
2.1.5. Issues Considered but not Further Analyzed	19
2.1.6. Planning Criteria	20
2.1.7. Planning Process	20
2.1.7.1. Collaboration/Partnership Relationships	20
2.1.7.2. Intergovernmental, Inter-Agency, and Tribal Relationships	21
2.1.7.3. Cooperating Agencies	21
2.1.7.3.1. Transportation Agencies	22

2.1.7.3.2. Arizona Game and Fish Department	22
2.1.7.4. Compliance	22
2.1.7.4.1. U.S. Fish and Wildlife Service	23
2.1.7.4.2. Sikes Act	23
2.1.8. Related Plans	23
2.1.9. Policy	24
2.1.10. Mission and Goals	24
2.2. Management Decisions	25
2.2.1. Biological Resources	26
2.2.1.1. Special Status Species	26
2.2.1.1.1. Special Status Species (TE)	26
2.2.1.1.1.1. Desired Future Conditions	26
2.2.1.1.1.1.1. Desert Tortoise	26
2.2.1.1.1.1.2. Gila Topminnow, Gila Chub, and Desert Pupfish	27
2.2.1.1.1.1.3. Spikedace	27
2.2.1.1.1.1.4. Southwestern Willow Flycatcher	27
2.2.1.1.1.1.5. Bald Eagle	27
2.2.1.1.1.1.6. Yellow-billed Cuckoo	27
2.2.1.1.1.2. Land Use Allocations	27
2.2.1.1.1.3. Management Actions	28
2.2.1.1.1.3.1. Desert Tortoise	28
2.2.1.1.1.3.2. Threatened or Endangered Species	29
2.2.1.1.1.3.3. Gila Topminnow, Gila Chub, and Desert Pupfish	29
2.2.1.1.1.3.4. Spikedace	30
2.2.1.1.1.3.5. Southwestern Willow Flycatcher	30
2.2.1.2. Wildlife and Fisheries (WF)	30
2.2.1.2.1. Desired Future Conditions	30
2.2.1.2.2. Land Use Allocations	31
2.2.1.2.3. Management Actions	31
2.2.1.3. Vegetation and Riparian Management (VM)	33
2.2.1.3.1. Desired Future Conditions	33
2.2.1.3.2. Management Actions	34
2.2.2. Cultural Resources (CL)	34
2.2.2.1. Desired Future Conditions	34
2.2.2.2. Land Use Allocations	34
2.2.2.3. Special Cultural Resource Management Areas (SCRMA) for Public Use Allocations	35
2.2.2.3.1. Management Actions	36
2.2.2.3.1.1. Potential Management Actions for Special Cultural Resource Management Areas	37
2.2.3. Fire Management (FM)	38
2.2.3.1. Desired Future Conditions	38
2.2.3.2. Land Use Allocations	38
2.2.3.3. Management Actions	39
2.2.4. Land Health Standards (LH)	42
2.2.4.1. Desired Future Conditions	42
2.2.4.1.1. Standard One: Upland Sites	42
2.2.4.1.2. Standard Two: Riparian-Wetland Sites	43

2.2.4.1.3. Standard Three: Upland and Riparian-Wetland Plant Communities	44
2.2.5. Lands and Realty Management (LR)	44
2.2.5.1. Desired Future Conditions	44
2.2.5.2. Land Use Allocations	44
2.2.5.3. Management Actions	45
2.2.6. Mineral Resources (MI)	45
2.2.6.1. Management Actions	45
2.2.7. Paleontological Resources (GL)	46
2.2.7.1. Desired Future Conditions	46
2.2.7.2. Land Use Allocations	46
2.2.7.3. Management Actions	47
2.2.8. Rangeland Management (GM)	47
2.2.8.1. Desired Future Conditions	47
2.2.8.2. Land Use Allocations	47
2.2.8.3. Management Actions	47
2.2.8.4. Arizona Standards for Rangeland Health - Guidelines for Grazing Administration	48
2.2.9. Recreation Management (RR)	50
2.2.9.1. Desired Future Conditions	50
2.2.9.2. Front Country Recreation Management Zone (RMZ)	50
2.2.9.3. Back Country Recreation Management Zone	50
2.2.9.4. Passage Recreation Management Zone	51
2.2.9.5. Land Use Allocations	51
2.2.9.5.1. Management Actions	52
2.2.9.5.2. General Recreation Management	52
2.2.9.5.3. Camping	53
2.2.9.5.4. Special Recreation and Event Permits	54
2.2.9.5.5. Front Country RMZ	55
2.2.9.5.6. Badger Springs Area Management Actions	55
2.2.9.5.7. Cordes Lakes Area Management Actions	55
2.2.9.5.8. Bloody Basin Road Entrance (at the existing kiosk)	55
2.2.9.5.9. Back Country RMZ	56
2.2.9.5.10. Passage RMZ	56
2.2.10. Soil, Air, and Water Resources (WS)	56
2.2.10.1. Desired Future Conditions	56
2.2.10.2. Management Actions	56
2.2.11. Special Designations (WR)	57
2.2.11.1. Desired Future Conditions	57
2.2.11.2. Land Use Allocations	57
2.2.11.3. Management Actions	58
2.2.12. Travel Management (TM)	58
2.2.12.1. Desired Future Conditions	58
2.2.12.2. Land Use Allocations	58
2.2.12.3. Management Actions	59
2.2.12.4. Route Management for Motorized Use: Bloody Basin Road	60
2.2.12.5. Route Management for Motorized Use: All Recreation Management Zones (RMZs)	61

2.2.12.6. Route Management for Motorized Use: Front Country and Passage RMZs	61
2.2.12.7. Route Management for Motorized Use: Back Country RMZ	61
2.2.12.8. Route Maintenance for Motorized Use (except Bloody Basin Road)	62
2.2.12.9. Trail Management for Non-Motorized and Non-Mechanized Recreation Use: All RMZs	62
2.2.12.10. Trail Management for Non-Motorized and Non-Mechanized Recreation Use: Front Country and Passage RMZs	62
2.2.12.11. Trail Management for Non-Motorized and Non-Mechanized Recreation Use: Back Country RMZ	63
2.2.12.12. Travel Management Implementation Decisions	63
2.2.13. Visual Resource Management (VR)	63
2.2.13.1. Desired Future Conditions	63
2.2.13.2. Desired Future Conditions for Recreation Management Zones	64
2.2.13.3. Land Use Allocations	64
2.2.13.4. Management Actions	64
2.2.14. Wilderness Characteristics (WC)	65
2.2.14.1. Desired Future Conditions	65
2.2.14.2. Management Actions	65
2.3. Public Involvement	66
2.4. Management Plan Implementation	67
2.4.1. Immediate Decisions	67
2.4.2. One-Time Decisions	67
2.4.3. Long-Term Guidance/Life of Plan Direction	67
2.4.4. General Implementation Schedule of “One-Time” Actions	68
2.4.5. Implementation Updates	68
2.4.6. Maintaining the Plan	68
2.4.7. Changing the Plan	69
2.5. Plan Evaluation and Adaptive Management	69
2.5.1. Plan Evaluation	69
2.5.2. Adaptive Management	70
Abbreviations and Acronyms	71
Glossary	79
References Cited	111
Appendix A. Agua Fria National Monument Proclamation	113
Appendix B. Administrative Actions and Standard Operating Procedures	117
B.1. Air Quality	117
B.1.1. Standard Operating Procedures	117
B.2. Biological Resources	117

B.2.1. Administrative Actions	117
B.2.2. Standard Operating Procedures	120
B.3. Cultural Resources	128
B.3.1. Administrative Actions	128
B.4. Standard Operating Procedures	130
B.5. Fire Management	130
B.5.1. Standard Operating Procedures	130
B.6. Lands and Realty Management	131
B.6.1. Standard Operating Procedures	131
B.7. Law Enforcement	131
B.7.1. Standard Operating Procedures	131
B.8. Paleontological Resources	132
B.8.1. Administrative Actions	132
B.8.2. Standard Operating Procedures	132
B.9. Public Safety	133
B.9.1. Standard Operating Procedures	133
B.10. Rangeland Management	134
B.10.1. Standard Operating Procedures	134
B.11. Recreation Management	136
B.11.1. Administrative Actions	136
B.12. Standard Operating Procedures	137
B.13. Soil and Water Resources	141
B.13.1. Administrative Actions	141
B.13.2. Standard Operating Procedures	142
B.14. Special Designations	142
B.14.1. Administrative Actions	142
B.15. Travel Management	143
B.15.1. Administrative Actions	143
B.15.2. Standard Operating Procedures	143
B.16. Visual Resource Management	144
B.16.1. Administrative Actions	144
B.16.2. Standard Operating Procedures	144
B.17. Wilderness Characteristics	145
B.17.1. Administrative Actions	145
Appendix C. Travel Management Plan	147
Appendix D. List Of Preparers	149
Appendix E. Maps for the Agua Fria NM ARMP	151
Index	153

List of Maps

Map 1. Agua Fria National Monument — Special Area Designations and National Register District	151
Map 2. Agua Fria National Monument / Bradshaw- Harquahala Planning Area — Tortoise Habitat	151
Map 3. Agua Fria National Monument — Pronghorn Fawning Habitat & Movement Corridors	151
Map 4. Agua Fria National Monument — Special Cultural Resource Management Areas	151
Map 5. Agua Fria National Monument / Bradshaw- Harquahala Planning Area — Fire Land Use Allocation	151
Map 6. Agua Fria National Monument — Grazing Allotments	151
Map 7. Agua Fria National Monument — Resource Management Zones & Wilderness Characteristics	151
Map 8. Agua Fria National Monument — Streams Eligible for Study as Wild & Scenic Rivers	151
Map 9. Agua Fria National Monument — Designated Route Network	151
Map 10. Agua Fria National Monument / Bradshaw- Harquahala Planning Area — Visual Resource Management	151

List of Tables

Table D.1. List Of Preparers	149
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Dear Reader Letter



United States Department of the Interior

Hassayampa Field Office
21605 North 7th Avenue
Phoenix, Arizona 85027
www.blm.gov/az/



In reply refer to: 1610 (AZP010)

Dear Reader/Interested Party:

I am pleased to announce that, after several years of hard work and collaborative efforts, the Agua Fria National Monument Resource Management Plan (Approved RMP) is complete. This document will provide guidance for the management of 70,900 acres of land administered by the Bureau of Land Management (BLM) in Yavapai County in central Arizona.

The attached Record of Decision (ROD) and Approved RMP have been prepared in accordance with the Federal Land Policy and Management Act (FLPMA) and the National Environmental Policy Act (NEPA). The ROD /Approved RMP is available to members of the public and will be sent to pertinent local, State, Tribal and Federal government entities. The ROD finalizes the proposed decisions presented in the Proposed RMP/Final Environmental Impact Statement (FEIS) that was released on August 8, 2008 and subject to a 30-day protest period that ended on September 8, 2008. Three protest letters with standing were received. The protests were reviewed by the BLM Director in Washington, D.C. After careful consideration of all points raised in these protests, the Director concluded the responsible planning team and decision makers followed all applicable laws, regulations, policies, and pertinent resource considerations in developing the proposed plan. Minor adjustments or points of clarification are incorporated into the Approved RMP in response to issues raised in the protest process and final BLM review. These minor changes are discussed in the ROD under the section titled Modifications and Clarifications, but the protest review did not result in any significant changes from the Proposed RMP.

The approval of this ROD by the BLM Director serves as the final decision for all land use planning and implementation-level decisions described in the attached Approved RMP. Implementation-level decisions in the Approved RMP, relating to route designations, are subject to appeal. Appeal procedures for these implementation decisions are described on page 8 of the attached ROD. Future implementation of land use plan decisions will not be undertaken without suitable further NEPA analysis, including all appropriate public involvement and any hearings available to the public.

Notification of the approval of this ROD /Approved RMP will be announced via local news releases and on the Hassayampa Field Office website at:

http://www.blm.gov/az/st/en/fo/hassayampa_field_office.html

Hard copies and CD-ROM versions of the ROD /Approved RMP may be obtained by contacting the Hassayampa Field Office by phone at (623) 580-5500; by sending a request by email to AZ_AFNM_Bradshaw@blm.gov ; or at the following address:

Bureau of Land Management
Hassayampa Field Office
21605 N. 7th Avenue
Phoenix, Arizona 85027

The BLM is pleased to provide this copy of the Agua Fria National Monument ROD /Approved RMP for your reference. We greatly appreciate the efforts of all who contributed to completion of this Approved RMP, including the State of Arizona, Yavapai County, and numerous Federal and State government agencies that worked closely with us to complete this important effort. We also appreciate the extensive public involvement during this time by local communities, organizations, and individuals. Public input informed and improved this planning document. We look forward to continuing to work with our partners and citizens as we implement the decisions in this Approved RMP.

Sincerely,

Steven Cohn
Field Manager

Chapter 1. Record of Decision



1.1. Introduction

This Record of Decision (ROD) approves the Bureau of Land Management's (BLM's) proposal to manage the BLM-administered public lands within the Agua Fria National Monument as presented in the attached Approved Resource Management Plan (Approved RMP). This Approved RMP was described as Alternative E in the *Agua Fria National Monument and Bradshaw-Harquahala Proposed Resource Management Plan and Final Environmental Impact Statement* (PRMP/FEIS), which was released in August 2008. While the PRMP/FEIS also addressed management of the Bradshaw-Harquahala Planning Area, which is also administered by the Hassayampa Field Office, this ROD applies only to those decisions for management of the Monument.

On January 11, 2000, Presidential Proclamation 7263 created the Agua Fria National Monument to ensure protection of an extraordinary array of scientific and historic resources. These monument objects include one of the most significant systems of late prehistoric sites in the American Southwest; hundreds of diverse prehistoric and historic sites that record thousands of years of human history in visually spectacular settings; and an expansive mosaic of semi-desert grassland, cut by ribbons of valuable riparian forest, which provides habitat for a wide range of sensitive wildlife and fish species.

The Agua Fria National Monument (AFNM) is located in southeastern Yavapai County, Arizona, and contains 70,900 acres of BLM-administered lands and 1,444 acres of private land. The decisions in the Approved RMP only apply to the BLM-administered lands within the Monument.

This ROD provides an overview of the alternatives considered; a summary of protests received and clarifications made in response; a summary of the types of decisions and the key decisions in the plan; management considerations and rationale for the decisions; and an overview of public involvement in the planning process.

1.2. Overview of the Alternatives

Five alternatives, including a No Action Alternative, were analyzed in detail in the Draft RMP/EIS (BLM 2006) and the PRMP/FEIS (BLM 2008). The alternatives were developed to address major planning issues identified through the scoping process and to provide management direction for resource programs. Each alternative represented a general theme that guided the development of desired future conditions, land use allocations, and management actions for specific resources. Each alternative provided management direction at a broad scale to govern the protection and use of the resources on BLM-administered lands in AFNM.

1.2.1. Alternative A: (No Action Alternative)

Alternative A described the current management of BLM-administered lands in the AFNM. The current management identifies the management decisions contained within existing management plans, as well as the *Agua Fria National Monument Current Management Guidance* (BLM 2002). These management actions would have continued to occur if new decisions had not been made to alter them. Alternative A served as a baseline and an opportunity to compare the current management with the various management strategies that were proposed in Alternatives B, C, D, and E.

1.2.2. Alternative B: Management for Increased Recreational Use

Alternative B allowed for relatively high levels of public use allocations for interpreted archaeological sites and included more opportunities for public access with recreation-related facilities and development, to the extent consistent with protection of monument values. For example, Alternative B included the designation and promotion of Bloody Basin Road as a Back Country Byway, as well as more acres allocated to the Front Country Recreation Management Zone.

1.2.3. Alternative C: Management for Use and Landscape Protection

Alternative C generally would have imposed more restrictive decisions on recreation and other activities than would Alternative B, with fewer related developments or facilities.

1.2.4. Alternative D: Management for Primitive Landscape Protection

Alternative D emphasized the protection of undeveloped, primitive landscapes, with more acres allocated to manage for wilderness characteristics and non-motorized recreation with limited recreational facilities. Alternative D included the most acres allocated to the Back Country Recreation Management Zone . This alternative also included the withdrawal of authorized livestock grazing from all allotments.

1.2.5. Alternative E: Management for Resource Sustainability and Consistent Uses (Proposed Plan)

Alternative E combines elements selected from the other alternatives that were further refined. It is designed to respond most comprehensively to each of the issues and management concerns identified in the planning process. Using the Preferred Alternative in the DRMP/DEIS, the BLM revised this alternative to incorporate and address comments received during the 90 day public comment period. Through clarifications in response to the protests received, the Proposed RMP is now the Approved RMP, which is attached to this ROD. In the most comprehensive manner, the Approved Plan is designed to respond to each of the issues and management concerns recognized during the planning process. The BLM determined that the decisions presented under Alternative E will protect the values defined in the Monument Proclamation, while allowing activities that support scientific studies and public stewardship and are consistent with the protection of the monument objects and resources.

Alternative E, the Approved Plan, is considered by the BLM to be the environmentally preferable alternative when taking into consideration the natural, social, and economic components of the human environment. The U.S. Council on Environmental Quality (CEQ) has defined the environmentally preferable alternative as the alternative that will promote the national policy as expressed in Section 101 of the National Environmental Policy Act (NEPA). This section lists six broad policy goals for all federal plans, programs, and policies:

NaNulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

- NaAssure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
- NaAttain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- NaPreserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment that supports diversity and variety of individual choice;
- NaAchieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
- NaEnhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

In comparison with the other alternatives that were analyzed, Alternative E best meets the above NEPA goals for the future management of the AFNM. It provides a high level of protection of natural and cultural resources, while accommodating visitors and economic activities in a manner consistent with resource protection and recognition of valid existing rights. This alternative acknowledges that the more isolated areas of the AFNM will be managed to preserve their remoteness and maintain wilderness characteristics. At the same time, it provides appropriate access to areas of relatively high use and along major travel corridors to ensure that the public can visit, enjoy, and learn about the Monument. Alternative E best meets the requirements of Section 101 of NEPA and was thus selected as the environmentally preferable alternative.

1.3. Results of Protest Review

The BLM received three protest letters during the 30-day protest period provided for the proposed land use plan decisions in the PRMP/FEIS in accordance with 43 CFR Part 1610.5-2. Protesting parties are listed below:

1. Steve and Barbara Waugh, Prescott Open Trails Association
2. Sanford Cohen, Prescott Open Trails Association
3. Sierra Club, Grand Canyon Chapter

Main protest points pertained to:

Issue 1. Members of the Prescott Open Trails Association object to the proposed closure to motorized use of a segment of Badger Springs Wash, which has been used as a riding trail for all-terrain vehicles and motorcycles.

Issue 2. The Sierra Club asserts that grazing management decisions fail to provide protection to the objects defined in the Monument Proclamation. Since many riparian areas are functioning at risk, the Sierra Club states that BLM should consider removing livestock as a temporary or permanent tool for riparian recovery.

Issue 3. Sierra Club states that by allowing livestock degradation of the habitat of federally listed and sensitive fish and wildlife species, the management plan fails to protect these species.

Issue 4. Proposed seasonal restrictions on grazing in riparian areas would entail more fencing, which could cause the fragmentation of wildlife habitat and restrict movements of native species including pronghorn.

Issue 5. Sierra Club asserts that the use of the allotment evaluation process to determine management actions via the Land Health Standards and Guidelines process does not provide sufficient, meaningful analysis of the proposed action in regard to grazing levels and authorizations in the RMP.

The BLM Director's decisions on the protests are summarized in the Director's Protest Resolution Report, Agua Fria National Monument and Bradshaw-Harquahala Resource Management Plans, released on February 2, 2009. The Director dismissed the two protests from members of the Prescott Open Trails Association because the protests cite an implementation decision relating to route designations. Implementation decisions are not subject to protest under the planning regulations. However, any party adversely affected by an implementation decision may appeal such decision to the Interior Board of Land Appeals. The Director denied the protest from the Sierra Club and included a response to the protest in the *Director's Protest Resolution Report*. In summary, the Director concluded that the BLM Arizona State Director followed the applicable laws, regulations, and policies, and considered all relevant resource information and public input in developing the Proposed RMP.

The BLM Director resolved the protests without making significant changes to the Proposed RMP, though minor clarifications were made and have been explained in the Clarifications section below.

1.4. The Decision

The decision of the BLM is to approve the attached document as the Approved Resource Management Plan for BLM-administered public lands in the AFNM, which are managed by the Hassayampa Field Office. The Approved RMP replaces relevant decisions in the *Phoenix Resource Management Plan* (BLM 1988).

The Approved Plan was prepared under the regulations of 43 Code of Federal Regulations (CFR) Part 1600, which implements the Federal Land Policy and Management Act (FLPMA) of 1976. An Environmental Impact Statement (EIS) was prepared for this Approved RMP in compliance with the National Environmental Policy Act (NEPA) of 1969. The plan is nearly identical to the one presented in the PRMP/FEIS published in August 2008. Management decisions and guidance for public lands in the AFNM are presented in the Approved RMP attached to this ROD in the section titled *Management Decisions*.

The Approved Plan emphasizes protection and restoration of the natural and cultural resources that constitute the monument objects, while providing for uses that are consistent with resource protection. The decisions in the Approved Plan meet the purpose and significance of the AFNM and comply with Presidential Proclamation 7263.

1.4.1. What the Decision/Approved RMP Provides

The Approved RMP provides overall direction for management of all resources on BLM-administered lands in the Monument. Many land use plan decisions are implemented or become effective upon publication of the ROD for the Approved Plan. Such decisions were attained using the planning process found in 43 CFR 1600 and guide future land management actions and subsequent site-specific implementation decisions. When presented to the public as proposed decisions, land use plan decisions can be protested to the BLM Director; however, they are not appealable to the Interior Board of Land Appeals.

Land use plan decisions represent the desired outcomes and the actions needed to achieve them. The Approved Plan is the summation of its desired future conditions, land use allocations, special designations, and management actions, along with the associated administrative actions and standard operating procedures that represent day-to-day actions, rather than plan decisions.

Implementation decisions and management actions that require additional site-specific project planning, as funding becomes available, will require further environmental analysis. Some implementation decisions (e.g., route designations) are finalized with this ROD and thus require no further environmental analysis. Administrative Actions are not land use planning or implementation decisions, but are a key component of the Approved RMP as they address day-to-day procedures, as well as collaborative efforts with partners such as the Friends of the Agua Fria National Monument.

Brief descriptions of the types of land use plan decisions are presented below.

Desired Future Conditions

Land use plans express desired future conditions or desired outcomes in terms of specific goals, standards, and objectives for resources and/or uses. They direct the BLM actions in most effectively complying with legal mandates, numerous regulatory responsibilities, national policy, BLM State Director guidance, and other resource or social needs. Land use plans are designed to most effectively meet these desired future conditions through land use allocations, special designations, or management actions.

Land Use Allocations (Allowable Uses)

Allowable, restricted, or prohibited uses are land use allocations that identify lands where uses are allowed, including any restrictions needed to meet goals and objectives. Areas may be identified to exclude specific uses in order to protect resource values. Examples of these decisions include areas to be managed for wilderness characteristics, and which types of recreational activities or facilities will or will not be permitted in certain areas. Land use allocations have geographic boundaries. It is common for specific resource or use allocations to overlap with other resource or use allocations.

Special Designations

Special designations include those that are designated by Congress for special protection, such as wilderness areas, wild and scenic rivers, or national historic or scenic trails. Such designations are not land use plan decisions. However, recommendations for designation can be made to Congress at the land use plan level. Congress may then act on these recommendations at a later time. Administrative designations made by the BLM (e.g., designating Areas of Critical Environmental Concern (ACECs) or watchable wildlife viewing sites) are also considered special designations and can be made in the land use plan.

Management Actions

Management actions include those provisions that help in meeting the established goals and objectives, and include measures that will be applied to guide day-to-day activities on public lands to meet desired future conditions. Management actions are categorized as actions to

achieve desired outcomes and may include but are not limited to stipulations, guidelines, best management practices, and design features.

Administrative Actions

Administrative actions are day-to-day activities conducted by the BLM, often required by FLPMA. BLM administrative actions do not require NEPA analysis or a written decision by a responsible official to be accomplished. Examples of administrative actions include mapping, surveying, inventorying, monitoring, and collecting needed information through research and studies. Administrative actions also include developing and sustaining partnerships to achieve desired future conditions. See Appendix B, *Administrative Actions and Standard Operating Procedures* in the attached Approved RMP for descriptions of Administrative Actions and Standard Operating Procedures.

Key Decisions in the Approved RMP

Listed below are key management decisions in the Approved Plan.

- Allocates wildlife habitat areas for pronghorn fawning and movement corridors, to be managed to avoid habitat fragmentation and provide conditions that promote seasonal migrations and fawning behavior.
- Provides for management actions to protect threatened, endangered, and sensitive fish and wildlife species, and to establish and maintain thriving populations of native fish species in the Agua Fria River and perennial waters.
- Identifies 20,900 acres for management to maintain wilderness characteristics.
- Identifies scientific use allocations and protective actions for cultural resources (archaeological sites and places of traditional cultural significance).
- Identifies two Special Cultural Resource Management Areas (SCRMA) with specific sites available for public use allocations, which would allow unobtrusive development for interpretive use and public education. Also identifies 60,750 acres (86% of AFNM) as a Low Use SCRMA where sites are excluded from interpretive development and commercial tours. Allocates 57,650 acres (81% of AFNM) as the Back Country Recreation Management Zone (RMZ), where primitive recreation opportunities are managed to maintain the natural landscape character with minimal development of facilities. Allocates 11,900 acres, which are more accessible to the public, as the Front Country RMZ to accommodate types of facilities and interpretive opportunities that are consistent with resource protection.
- Prohibits recreational target shooting in order to protect monument resources and visitors. Hunting activities may continue as consistent with state laws.
- Determines that 36.3 miles along 8 tributaries of the Agua Fria River are eligible for study as to their suitability for Wild and Scenic River designation. These stream segments will be managed to protect their outstanding scenic, wildlife, and cultural resource values.
- Excludes the Black Canyon utility corridor and any new utility corridors from the AFNM.
- Establishes seasonal restrictions on riparian use on the 11 grazing allotments in AFNM.
- Limits motorized travel to designated routes only. An appended Travel Management Plan establishes implementation decisions for route designations including 52 miles closed to motorized and mechanized uses; 25 miles limited to administrative uses; and 94 miles remaining open to travel.
- Removes designations of the Perry Mesa and Larry Canyon Areas of Critical Environmental Concern (ACECs). The Approved RMP carries forward the protective management actions, providing a higher level of protection across a broader landscape.

This ROD serves as the final decision establishing the land use plan decisions outlined in the Approved RMP and is effective on the date it is signed. No further administrative remedies are available for these land use plan decisions.

1.4.2. What the Decision/Approved RMP Does Not Provide

The Approved RMP does not contain decisions for actions outside the jurisdiction of the BLM. Comments asking for decisions that were beyond the scope of this plan were forwarded to the appropriate agency.

In addition, many decisions are not appropriate at this level of planning and are not included in the ROD. Examples of these types of decisions include:

Statutory requirements. The decision will not change the BLM's responsibility to comply with applicable laws and regulations.

National policy. The decision will not change the BLM's obligation to conform to current or future national policy.

Funding levels and budget allocations. These are determined annually at the national level and are beyond the control of the field office.

1.4.3. Implementation Decisions

Implementation decisions (or activity level decisions) are management actions tied to a specific location that take action to implement land use plan decisions. Implementation decisions generally constitute the BLM's final approval allowing on-the-ground actions to proceed and require appropriate site-specific planning and NEPA analysis. Such decisions may be incorporated into implementation plans (activity or project plans) or may exist as stand-alone decisions.

Unlike land use plan decisions, implementation decisions are not subject to protest under the planning regulations. Instead, implementation decisions are subject to various administrative remedies, particularly appeals to the IBLA (under 43 CFR 4.410). Where implementation decisions are made as part of the land use planning process, they are still subject to the appeals process or other administrative review as prescribed by the specific resource program regulations after the BLM resolves the protests to land use plan decisions and makes a decision to adopt the management plan. For example, the designation of a specific route is an implementation level decision, rather than a land use plan decision. Consequently, individual route designations are subject to a separate appeals process, which is described below.

All route designations within the AFNM (and associated decisions in the attached Travel Management Plan) are finalized with this ROD and may be appealed at this time. Except for these decisions, the future implementation decisions identified in the Approved RMP will all require site-specific planning and further NEPA analysis before they are implemented.

1.4.3.1. Appeal Procedures for Implementation Decisions

Implementation decisions may be appealed under the procedures outlined in BLM Handbook 8720-1, Chapter IV (8) and 43 CFR Part 4. Any party adversely affected by an implementation decision may appeal within 30 days of receipt of this decision in accordance with the provisions

of 43 CFR Part 4 Subpart E. Public notification of the implementation decisions in the Approved RMP will be considered to have occurred on the date of publication of the Notice of Availability in the *Federal Register*.

The party disputing the decision must file a written request for review, setting out reasons for believing that the decision should be reconsidered. Within 30 days of the decision, a notice of appeal must be filed in the office of the authorized officer at the following address:

Bureau of Land Management
Hassayampa Field Office Manager
21605 N. 7th Avenue
Phoenix, AZ 85027

If a statement of reasons for the appeal is not included with the notice, it must be filed with the IBLA, at the following address, within 30 days after the notice of appeal is filed with the authorized officer:

Interior Board of Land Appeals
Office of Hearings and Appeals
U.S. Department of the Interior
801 North Quincy St., Suite 300
Arlington, VA 22203

It is suggested that any appeal be sent certified mail, return receipt requested.

Any party wishing to file a petition for stay pending the outcome of an appeal or one or more implementation decisions must show sufficient justification based on the following standards under 43 CFR 4.21(b):

- The relative harm to the party if the stay is granted or denied,
- The likelihood of the appellant's success on the merits,
- The likelihood of irreparable harm to the appellant or resources if the stay is not granted, and
- Whether the public interest favors granting the stay.

If a petition for stay is submitted with the notice of appeal, a copy of the notice of appeal and petition for stay must be served on each party named in the decision from which the appeal is taken, and with the IBLA at the same time it is filed with the authorized officer.

A copy of the notice of appeal, any statement of reasons, and all pertinent supporting documents must be sent to the Regional Solicitor at the following address, not later than 15 days after filing the document with the authorized officer and/or IBLA:

Office of the Regional Solicitor
U.S. Department of the Interior
6201 Federal Building
125 South State Street
Salt Lake City, UT 84138

1.4.4. Modifications and Clarifications

Changes to the Approved RMP consist primarily of clarifications. Several definitions in the Glossary, relating to Travel Management, were modified to conform to updated BLM guidance since the PRMP/FEIS was published in 2006.

As the result of continued internal review, the BLM made several clarifications between the PRMP/FEIS and the Approved RMP.

- To facilitate locating a resource, the BLM restructured the resource sections; the resources now appear in alphabetical order.
- Some decisions presented in the PRMP/FEIS were placed in the incorrect decision category. These decisions were moved to their correct category. (This includes some Management Actions that were actually Administrative Actions. Administrative Actions were moved to Appendix B, *Administrative Actions and Standard Operating Procedures* in the Approved RMP.)
- Some decisions were clarified with additional text.
- Some decisions presented in the PRMP/FEIS were repeated in two program areas. In the Approved RMP, these decisions are coded only once. The code reflects the program that is most affected.

Minor grammatical or editorial edits were completed and are not described here in detail.

Also, some PRMP/FEIS appendices that relate to the AFNM were not included in the Approved RMP or are incorporated by reference. The appendices incorporated by reference are accessible for review in the PRMP/FEIS, through the Arizona BLM website, or by contacting the Phoenix District to obtain a CD copy of the PRMP/FEIS.

- Appendix B, *Scoping Results*, was deleted since this addressed the process prior to the DRMP/DEIS and the PRMP/FEIS.
- Appendix C, *Applicable Laws, Regulations, Policies and Planning Criteria* provides descriptions of the applicable federal laws, regulations and policies and is incorporated by reference.

Several resource-specific appendices or portions thereof in the PRMP/FEIS also have been incorporated by reference. These include Appendix H, Priority Wildlife Species List; Appendix L, *Fire Management Units*; Appendix O, *Grazing Allotment Information*; Appendix Q.1., *Riparian Functional Condition: Agua Fria National Monument*; Appendix S, *Benefits-Based Recreation*; and Appendix T, *Off-Highway Vehicle Mitigation Examples*.

A new appendix was added to the Approved RMP:

- Appendix B, *Administrative Actions and Standard Operating Procedures*. This appendix includes Administrative Actions (by program area) from the PRMP/FEIS. Administrative Actions are not land use plan decisions. However, these are day-to-day, non-ground-disturbing activities and are an important component when considering program activities. Standard Operating Procedures are based on laws, regulations, and executive orders as well as BLM planning manuals, policies, instruction memoranda, and applicable planning documents.

1.5. Management Considerations for Selecting the Approved Plan

The alternatives described in the Draft RMP/EIS, in addition to the public comments and input provided throughout this planning process, were considered in preparing the Proposed RMP. The Proposed RMP is a combination of decisions from the five alternatives considered in the Draft RMP/EIS, with emphasis on Alternative E. The Approved RMP is similar to the Proposed RMP, containing only minor revisions and clarifications stemming from protests and internal review.

This approach for managing the AFNM was chosen as the Approved RMP because:

- It most effectively accomplishes the overall objectives of protecting the monument objects and values, while facilitating appropriate scientific research and opportunities for public education and interpretation.
- It best addresses the diverse community and stakeholder concerns in a fair and equitable manner.
- It provides the most workable framework for future management of the AFNM.

Among the attributes that led to this determination are the provisions for protecting monument resources and values, while providing for visitor use and other activities in a manner consistent with sustaining those values. The provisions relating to specific resources are addressed throughout the Approved RMP.

The Approved RMP responds to increasing demands for recreation on BLM-administered lands near Phoenix, while adhering to FLPMA's mandate for multiple use management and sustained yield of renewable resources. Where recreational activities that would be inconsistent with protecting monument values (such as recreational target shooting and motorized competitive events) could be accommodated on BLM-administered lands in the adjacent Bradshaw-Harquahala planning area, such activities are excluded from the Monument.

The Approved Plan responds to travel management and access issues by designating routes and identifying routes to be closed, available for continued use, or available for administrative use only. These implementation decisions are consistent with the land use plan decisions and are contained within an attached Travel Management Plan.

The Arizona Game and Fish Department (AGFD) has jurisdiction over the populations of sensitive wildlife species in the Monument, while the BLM manages wildlife habitat. Therefore the BLM collaborated with the AGFD throughout the planning process to develop management actions to protect the biological values defined in the Monument Proclamation.

Consistency and Consultation Review

CEQ regulations mandate that the federal agencies responsible for preparing NEPA analysis and documentation do so "in cooperation with state and local governments" and other agencies with jurisdiction by law or special expertise. In support of this mandate, the BLM invited a broad range of local, state, tribal, and federal agencies to establish cooperating agency status with the BLM. Agencies that participated in the planning process, and with whom the BLM will cooperate in implementing the Approved RMP, include the U.S. Fish and Wildlife Service, Tonto National Forest, Prescott National Forest, Arizona Game and Fish Department, State Historic Preservation Officer, Arizona Department of Transportation, and Yavapai County. BLM also consulted with the Hopi Tribe, Yavapai-Prescott Indian Tribe, Yavapai-Apache Tribe, Salt River Pima-Maricopa

Indian Community, Gila River Indian Community, Ak-Chin Indian Community, and other tribes who have traditional cultural ties to the area.

Consistency of the Approved RMP with other local, state, tribal, and federal plans and policies was also considered as a factor in alternative selection. The Approved RMP is consistent with plans and policies of the Department of the Interior and Bureau of Land Management, other federal agencies, state government, and local governments to the extent that the guidance and local plans are also consistent with the purposes, policies, and programs of federal law and regulation applicable to public lands.

The Arizona Governor's Office did not identify any inconsistencies between the PRMP/FEIS and state or local plans, policies, and programs following the 60-day Governor's Consistency Review of the PRMP/FEIS (initiated on April 15, 2008, in accordance with planning regulations at 43 CFR Part 1610.3 2(e)).

1.6. Mitigation Measures

Measures to avoid or minimize environmental harm were built into the Approved RMP where practicable and appropriate. Many of the standard management provisions will minimize impacts when applied to activities proposed in the planning area. The Arizona Land Health Standards, including *Arizona Standards for Rangeland Health and Guidelines for Grazing Administration* (BLM 1997) will be used as the base standards to assess the health of BLM lands in the AFNM. Best management practices will be used (when applicable) for a number of uses including livestock grazing, recreation and travel management, and fire management. Additional measures to mitigate environmental impacts may also be developed during subsequent NEPA analysis at the activity-level planning and project stages, or through legally mandated consultations covering those same proposed actions.

1.7. Plan Monitoring

As the Approved RMP is implemented, the BLM expects that new information gathered from field inventories and assessments, research, other agency studies, and other sources will update baseline data or support new management techniques and scientific principles. To the extent that such new information or actions address issues covered in the Approved RMP, the BLM will integrate the data through a process called plan maintenance or updating. This process includes the use of monitoring, which is the repeated measurement of activities and conditions over time with the implied purpose to use this information to adjust management, if necessary, to achieve or maintain resource objectives. BLM planning regulations (43 CFR Part 1610.4-9) call for monitoring Resource Management Plans on a continual basis and establishing intervals and standards based on the sensitivity of the resource to the decisions involved. CEQ regulations implementing NEPA state that agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases (40 CFR Part 1505.2(c)).

Plan implementation also includes the use of an adaptive management strategy. As part of this process, the BLM will review management actions in the Approved RMP periodically to determine whether the objectives set forth in this and other applicable planning documents are being met. Where they are not being met, the BLM will consider appropriate adjustments. Where the BLM considers taking or approving actions that would alter or not conform to overall

direction of the Approved RMP, the BLM will prepare a plan amendment and environmental analysis in making its determinations and in seeking public comment.

There are two types of monitoring (implementation and effectiveness), which are described below.

1.7.1. Implementation Monitoring

Implementation monitoring, known by some agencies as compliance monitoring, is the most basic type of monitoring and simply determines whether planned activities have been implemented in the manner prescribed by the Approved RMP. This monitoring documents the BLM's progress toward full implementation of the land use plan decision. There are no specific thresholds or indicators required for this type of monitoring, but progress towards plan compliance will be evaluated and reported at 5 year intervals from the date of plan approval. Aspects of the effectiveness monitoring may also be addressed in this periodic evaluation.

1.7.2. Effectiveness Monitoring

Effectiveness monitoring determines if the implementation of activities has achieved the desired future conditions (i.e., goals and objectives) set forth in the Approved RMP. Effectiveness monitoring asks the following question: "Was the specified activity successful in achieving the objective?" The answer requires knowledge of the objectives established in the Approved Plan, as well as indicators that can be measured. Indicators are established by technical specialists in order to address specific questions through the collection and analysis of appropriate data. Success is measured against the benchmark of achieving the objectives (desired future conditions) established by the Approved RMP, which may include regulated standards for resources such as endangered species, air, and water. The interval between these efforts will vary by resource and expected rate of change, but effectiveness monitoring progress will generally be reported to the monument manager on an annual basis. These reports will include trends and conclusions, when appropriate, and be incorporated into the evaluation reports completed at 5-year intervals.

The BLM will monitor the Approved RMP to determine whether the objectives set forth in this document are being met and if applying the land use plan direction is effective. Monitoring is addressed in the Management Decisions section of the Approved RMP. If monitoring shows land use plan actions or best management practices are not effective, the BLM may modify or adjust management without amending or revising the plan as long as assumptions and impacts disclosed in the analysis remain valid and broad-scale goals and objectives are not changed (see the discussion entitled Maintaining the Plan in the Approved RMP). Where the BLM considers taking or approving actions that will alter or not conform to overall direction of the plan, the BLM will prepare a plan amendment or revision and environmental analysis of appropriate scope (see the discussion entitled in the Approved RMP).

1.8. Implementation of the Management Plan

Implementation of the Approved RMP will begin upon publication of its Notice of Availability in the *Federal Register*. Some decisions require immediate action and will be implemented upon publication of the ROD and Approved RMP. Other decisions will be implemented over a period of years. The rate of implementation is tied, in part, to BLM's budgeting process. The implementation of the Approved RMP will also occur in accordance with an adaptive management framework.

1.9. Public Involvement

One of the BLM's primary objectives during development of the Agua Fria National Monument Approved RMP was to understand the views of various publics by providing opportunities for meaningful participation in the planning process. The interdisciplinary planning team used the scoping process to identify relevant issues and conducted workshops that involved the public in developing the plan alternatives. Through communication media such as meetings, newsletters, and news releases, the public was provided opportunities to identify issues that needed to be addressed in the PRMP/FEIS. The goal was for this process to result in a better understanding of the planning process, the decisions that result from it, and the importance of collaborative stewardship as a strategy for implementation.

Productive partnerships emerged as a result of the planning process and are in place to assist the BLM in implementing the Approved RMP. The Friends of the Agua Fria National Monument was formally established as a non-profit organization in 2006. Its members actively contribute to public education and interpretation; protection and study of cultural, wildlife, and water resources; eradication of invasive plants; trash cleanups; and other activities. Current local partners also include Arizona State University, Deer Valley Rock Art Center, Museum of Northern Arizona, Upper Agua Fria Watershed Partnership, Black Canyon Heritage Park, Arizona Archaeological Society, Arizona Site Steward Program, Sonoran Audubon Society, Arizona Antelope Foundation, and the Desert Botanical Garden.

Specifically, the formal process of public involvement began when the BLM published the Notice of Intent to prepare an RMP with EIS in the Federal Register in April 2002. The Notice of Availability of the DRMP/DEIS was published on January 6, 2006. The BLM facilitated public involvement through a series of open houses and workshops in 2002 and 2003, and additional meetings were held in local communities to obtain comments on the DEIS in 2006. The Notice of Availability of the PRMP/FEIS was published on August 8, 2008.

The Hassayampa Field Office also maintained a national mailing list of approximately 1,500 individuals, agencies, interest groups, and tribes who expressed interest in the planning process. The BLM mailed planning bulletins to those on the mailing list to keep them informed of project status. Additionally, public meetings were announced at least 15 days prior to the event in local news media. The BLM also participated in numerous meetings with cooperating agencies, other federal agencies, American Indian Tribes, and state and local governments. Additional details concerning the coordination and consultation process are included in the Approved RMP in the section entitled *Planning Process*, and in Chapter 5 of the PRMP/FEIS.

1.10. Availability of the Plan

Copies of the Record of Decision and the Agua Fria National Monument Resource Management Plan may be obtained by viewing or downloading the document from the BLM website located at www.blm.gov/az; by obtaining a hard copy or CD at the BLM Phoenix District Office at 21605 N. 7th Avenue, Phoenix, Arizona 85027; or by sending a request by e-mail to the following address: AZ_AFNM_Bradshaw@blm.gov. Copies will also be available for review at local community libraries near the AFNM.

1.11. Field Manager Recommendation

Having considered a full range of reasonable alternatives, associated effects, and public input, I recommend adoption and implementation of the attached Agua Fria National Monument Resource Management Plan.

Steven M. Cohn
Hassayampa Field Manager

Date

Rem Hawes
Agua Fria National Monument Manager

Date

1.12. District Manager Concurrence

I concur with adoption and implementation of the attached Agua Fria National Monument Resource Management Plan.

Angelita Bullets
Manager, Phoenix District

Date

1.13. State Director Approval

In consideration of the foregoing, I approve the Agua Fria National Monument Resource Management Plan.

James G. Kenna
Arizona State Director

Date

Chapter 2. Approved Resource Management Plan

2.1. Introduction

The Bureau of Land Management (BLM), Hassayampa Field Office (HFO) has prepared the Approved Agua Fria National Monument Resource Management Plan (Approved RMP) to provide comprehensive current and future management of public lands administered by HFO in the Agua Fria National Monument (AFNM). The monument is located approximately 40 miles north of Phoenix, immediately east of Interstate Highway 17 in southeastern Yavapai County. Its boundaries encompass 72,344 acres, including 70,900 acres administered by the BLM with the remaining lands consisting of privately owned parcels (Map 1).

The Approved RMP was prepared in compliance with BLM's planning regulations Title 43 *Code of Federal Regulations* (CFR) 1600 under the authority of the Federal Land Policy and Management Act of 1976. This document also meets the requirements of the National Environmental Policy Act of 1969 (NEPA), the *Council on Environmental Quality Regulations for Implementing the NEPA* (40 CFR 1500-1508), and requirements of BLM's *NEPA Handbook* 1790-1.

This plan represents years of ongoing, coordinated efforts on the part of BLM Phoenix District, HFO and AFNM staff, BLM Arizona State Office staff, representatives of communities near the planning area, cooperating and collaborating government agencies, special interest and user groups, and hundreds of concerned citizens. The decisions outlined in this document will enable the BLM to manage and protect the unique resources and monument objects on public lands within the AFNM to achieve desired future conditions and management objectives in partnership with communities, organizations such as the Friends of the Agua Fria National Monument, and citizens.

2.1.1. Purpose and Need

The Agua Fria National Monument was established on January 11, 2000, when President William J. Clinton issued Presidential Proclamation #7263 under the Antiquities Act of 1906 (34 Stat. 225, 16 U.S. Code 431A). The monument was created to protect an array of scientific, archaeological, historical, and biological objects, which are described in Appendix A, *Agua Fria National Monument Proclamation*. These monument objects include one of the most significant systems of late prehistoric sites in the American Southwest, with hundreds of archaeological sites such as stone-masonry pueblos, cliffs covered with distinct rock art symbols, and extensive agricultural terraces used as ancient farms.

There are also historical sites that are remnants of ranching, sheep herding, mining, and military activities during the 19th and 20th centuries. Monument objects also encompass an expansive mosaic of semi-desert grassland, cut by ribbons of rare riparian forest, that provide habitat for a wide array of sensitive and endangered wildlife species. These include native fish species in the Agua Fria River and its tributaries. Monument objects are also referred to as “monument resources” and “monument values” throughout this document.

The Monument Proclamation is the principal direction for management of the monument. All other considerations are secondary to that edict. The Proclamation governs how the provisions of the Federal Land Policy and Management Act of 1976 (FLPMA) will be applied within the AFNM. Along with FLPMA, NEPA, and other legal mandates, it provides direction for the preparation of a management plan. This Approved RMP fulfills those directives by guiding management activities and providing for the protection of monument resources. It proposes to do so in a manner that creates opportunities for public education and stewardship, incorporates input

from the scientific community and the public at large, and reflects the national significance of these resources.

Public lands within the AFNM boundaries have been managed under the *Phoenix RMP* (BLM 1988) and *Agua Fria National Monument Current Management Guidance* (BLM 2002). Nearly the entire length of the Agua Fria River in the monument was recommended as suitable for designation to the National Wild and Scenic Rivers System in the *Arizona Statewide Wild and Scenic Rivers Legislative Environmental Impact Statement* (BLM 1994). Pending a Congressional decision on designation, BLM is directed to manage the river to protect its scenic, biological, and cultural values. Those portions of the prior management documents that are consistent with the monument management objectives were carried forward to this Approved RMP. This management plan creates a framework for future planning and decision making. Subsequent site-specific and more detailed planning and implementation will be done in conformance with this RMP.

The National Environmental Policy Act (NEPA) requires federal agencies to prepare an Environmental Impact Statement (EIS) on major federal actions. Since the Approved RMP is a major federal action, the BLM distributed the Draft Resource Management Plan/Draft Environmental Impact Statement (DRMP/DEIS) in January 2006 and the Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS) in August 2008. The FEIS documented the potential environmental impacts of implementing the Preferred Alternative from the DRMP/DEIS, as well as other alternatives, and conforms to U.S. Council on Environmental Quality regulations for implementing NEPA (40 CFR 1500).

2.1.2. Planning Area Description

Agua Fria National Monument is bounded on the south by Black Canyon City, on the west by Interstate Highway 17, on the east and north by the Tonto National Forest and Prescott National Forest, and on the northwest by state and private lands in the area of Cordes Junction (Map 1). In addition to Black Canyon City and Cordes Junction, nearby communities include Anthem, New River, Arcosanti, Mayer, and Dewey-Humboldt. West of Interstate 17, HFO manages public lands within the Black Canyon Management Unit under the Bradshaw-Harquahala Approved RMP.

The topography is dominated by a plateau of arid grasslands cut by deep canyons. Joe's Hill, the remnant of an ancient shield volcano on Perry Mesa, accounts for the rugged, rocky surface of the landscape. The Agua Fria River flows through the monument from north to south, and its steep canyon separates the landform known as Perry Mesa on the east from Black Mesa on the west. The mesas and the hilly country surrounding them support a diversity of vegetation zones and wildlife. Many of the numerous streams and springs flow through much of the year.

Historical and modern land uses have been dominated by homesteading, ranching, and mining (generally small-scale operations, except for the historic Richinbar gold mine on Black Mesa). Recreational activities include hunting, hiking, and traveling on Bloody Basin Road to the Tonto National Forest and Verde River. One Native American community, the Yavapai Prescott Indian Tribe, is located near the AFNM. The Hopi Tribe, Salt River Pima-Maricopa Indian Community, and other tribes in central and northern Arizona have expressed traditional cultural ties to these lands.

2.1.3. Scoping Issues

Development of this Approved RMP was formally initiated with publication of a Notice of Intent in the *Federal Register* on April 24, 2002. Over the next several years, the BLM conducted extensive public outreach, pursuing a number of collaborative efforts involving diverse communities and interests as part of plan development. These collaborative opportunities included informal meetings, community based partnership workshops, scoping meetings, alternative development workshops, and formal comment meetings. These are summarized in the Public Involvement section below and fully described on pages 661 through 663 of the Proposed RMP/Final EIS. In addition, communities were offered the opportunity to develop vision statements for public lands. Community vision statements from Black Canyon City, Castle Hot Springs, Dewey-Humboldt-Friends of the Agua Fria River Basin, and New River are included on pages 32 through 34 of the Proposed RMP. The BLM also provided an opportunity to protest the proposed decisions to the Director of the Bureau of Land Management prior to approval of this ROD as required by the BLM planning regulations.

Resource Management Plans are prepared to resolve significant issues and management concerns associated with the management of the public lands in the planning area. The issues drive the RMP in that the Approved Plan is primarily designed to resolve the identified planning issues.

The BLM interdisciplinary planning team used the scoping process to identify issues relevant to the AFNM. Through communication media such as meetings, newsletters, and news releases, the public was provided opportunities to identify issues that needed to be addressed in the Approved RMP. The planning team then analyzed the public's comments and identified the major planning issues to be resolved.

2.1.4. Issues Addressed

In early 2003, the BLM published the Scoping Report for the Agua Fria National Monument/Bradshaw-Harquahala Planning Areas (Jones and Stokes 2003). This document summarized the procedures, issues, and management concerns that were identified as the result of public meetings, comments received through the mail, and via email. Following the publication of the scoping report, the BLM continued to solicit input from the public, agencies, and staff members. Those additional comments all fell within the issues identified in the scoping report.

After the publication of the Agua Fria National Monument and Bradshaw-Harquahala DRMP/DEIS in January 2006, the BLM received 431 individual comment letters and 1,046 form letters during the 90-day public comment period. These letters contained more than 2,300 comments. Comments specifically relating to the AFNM focused on protection of monument values; protection of the Agua Fria River; consideration of the eligibility of Agua Fria tributary streams for designation to the National Wild and Scenic Rivers System; management of lands with wilderness characteristics; continuation of livestock grazing; and travel management issues. Public comments also expressed support for a ban on recreational target shooting in the monument.

2.1.5. Issues Considered but not Further Analyzed

During the planning process, the BLM received comments concerning issues that were infeasible or beyond the scope of this plan (e.g., establishing user fees that would be inconsistent with the Federal Lands Recreation Enhancement Act of 2004). When applicable, the BLM forwarded

comments received to agencies that have authority over the issues that were beyond the scope of this plan. Other issues that were not included could be addressed through administrative or policy action (e.g., use of an area for educational purpose).

2.1.6. Planning Criteria

Planning criteria are the constraints or ground rules that guide and direct the development of the plan. Criteria are taken from laws and regulations, BLM guidance, and input from state, county, and federal agencies, Indian tribes, and the public. These criteria were developed by the BLM to assure that the planning process and decision-making are focused on the pertinent issues, and to ensure that the BLM avoids unnecessary data collection and analyses. The criteria were used at four stages of the planning process (resource inventory, assessment of the current situation [which includes a description of current BLM guidance, discussion of existing problems, and opportunities to resolve them], formulation of alternatives, and selection of the Preferred Alternative).

The basic planning criteria are identified in Section 202 of the FLPMA:

- Follow the principles of multiple use and sustained yield (in this case, to the extent that these are consistent with the overall objective to protect monument objects).
- Use a systematic interdisciplinary approach, fully considering physical, biological, economic, and social aspects of public land management.
- Rely on the inventory of public lands, their resources, and other values to the extent such information is available.
- Consider the impact of federally approved actions on adjacent or nearby non-federal lands.
- Consider the relative scarcity of the values involved and alternative means and sites for realization of those values (for example, types of recreational activities that could be accommodated on lands outside the monument).
- Weigh the long-term benefits and consequences of proposed actions against short-term benefits and consequences.
- Comply with applicable pollution control laws, including state and federal air, water, noise, and other pollution standards and plans.
- Coordinate, to the extent consistent with public laws, resource planning and management programs of other federal departments and agencies, states, local governments, and Indian tribes.
- Provide the public with early notices and frequent opportunities to participate in the preparation of plans.
- Manage the public lands to prevent unnecessary or undue degradation of the lands.

2.1.7. Planning Process

2.1.7.1. Collaboration/Partnership Relationships

The AFNM conducts activities that require coordination with tribes, state agencies, other federal agencies, and interested publics. Coordination has been ongoing throughout this planning effort. Coordination is accomplished as a matter of course when implementing land use plan decisions through project development and site-specific activities. Key coordination efforts include those described below.

In addition to building communication networks early in the formal planning process, the BLM employed a contractor, James Kent Associates (JKA), who established contacts with communities and received citizens' comments on issues and concerns, while helping them to gain a better understanding of the land use planning process. These meetings occurred prior to the formal scoping process and took place in community settings and civic and social group meetings in New River, Black Canyon City, Cordes Junction, Mayer, Dewey-Humboldt, Prescott Valley, and Phoenix.

The Friends of the Agua Fria National Monument (FAFNM) is a non-profit organization established to advocate for the monument and to assist the BLM in management and public outreach activities. FAFNM has provided assistance in various ways such as monitoring and recording archaeological sites; conducting site tours and educational outreach events; removing trash and invasive species; and other service projects such as Adopt-a-Highway cleanups along Interstate 17. Among the many organizations providing assistance to AFNM are the Upper Agua Fria Watershed Coalition, Sonoran Audubon Society, Desert Botanical Garden, and Arizona Archaeological Society. Arizona State University, the Museum of Northern Arizona, and Northern Arizona University are among the institutions that have conducted scientific studies.

2.1.7.2. Intergovernmental, Inter-Agency, and Tribal Relationships

In developing this plan, the BLM coordinated with agencies and governments including Prescott National Forest, Tonto National Forest, U.S. Bureau of Reclamation, Federal Highway Administration, Arizona Department of Transportation (ADOT), Arizona Game and Fish Department (AGFD), Arizona State Historic Preservation Office (SHPO), Maricopa County, Yavapai County, and City of Phoenix.

The BLM initiated consultation with American Indian tribes who have oral traditions or cultural concerns relating to the planning area, or who are documented as having occupied or used portions of the area during prehistoric or historic times. These tribes include the Hopi Tribe, Yavapai Prescott Indian Tribe, and Yavapai-Apache Tribe at Camp Verde, Fort McDowell Yavapai Nation, Salt River Pima-Maricopa Indian Community, Gila River Indian Community, Ak-Chin Indian Community, and Tohono O'odham Nation. Follow-up meetings or tours were conducted, at their request, with the Hopi Tribe, Yavapai-Prescott Indian Tribe, and the Four Southern Tribes cultural resources group (representing the Salt River, Gila River, Ak-Chin, and Tohono O'odham communities).

2.1.7.3. Cooperating Agencies

In the first sentence of NEPA, Congress declares that:

It is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations...to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans (Sec.10 (a)).

Additionally, U.S. Council on Environmental Quality regulations, contained in 40 CFR 1501.6 and 1508.5, mandate that federal agencies responsible for preparing NEPA analysis and documentation do so "in cooperation with state and local governments" and other agencies with jurisdiction by law or special expertise (42 United States Code [USC] 4331(a), 4332(2)).

In support of this mandate, the BLM invited a broad range of local, state, tribal, and federal agencies to attend a series of meetings with the aim of developing Memorandum of Understanding (MOU) that would establish cooperating agency status with the BLM. Cooperating agency status offers the opportunity for interested agencies to assume additional roles and responsibilities beyond the collaborative planning processes of attending public meetings and reviewing and commenting on plan documents. MOUs are time-limited documents that describe the roles and responsibilities of the BLM and the cooperating agency during the planning process for a particular RMP. Agencies that requested Cooperating Agency status include ADOT, AGFD, and Yavapai County.

2.1.7.3.1. Transportation Agencies

In addition to working with ADOT and the Federal Highway Administration, BLM coordinated with county transportation departments. When these agencies plan and develop highway projects (for example, the planned improvement and widening of Interstate 17), the BLM is involved in their design and contributes to environmental impact analysis. In that process, the BLM will coordinate with the responsible agency to develop design features that minimize adverse impacts to monument values. The BLM will work with the responsible agency to evaluate and incorporate safe and effective wildlife crossings to ensure long-term species viability and maintaining habitat connectivity. The BLM will also work with the agency to provide continued safe access to public lands from developed roadways for staff, researchers, and visitors.

2.1.7.3.2. Arizona Game and Fish Department

AGFD and the BLM work cooperatively to manage resources within the AFNM. The BLM is responsible for management of wildlife habitats on BLM-administered lands, while AGFD is responsible for managing fish and wildlife. Continued efforts will be made to coordinate with AGFD for opportunities to enhance fish and wildlife habitat, species diversity, and riparian health.

In 2003, the BLM and AGFD signed a Memorandum of Understanding (MOU) giving AGFD cooperating agency status on the BLM planning efforts in Arizona. The MOU establishes protocols that direct the cooperative working relationship between the agencies. The Master MOU between BLM and the Arizona Game and Fish Commission provides context to better enable both agencies to work in partnership and to make decisions in a consistent manner across the state. The HFO and AFNM staff worked closely with the AGFD throughout the planning process, and the guidelines established in the MOU apply to implementation of this Approved RMP.

2.1.7.4. Compliance

Consultation with the Arizona SHPO and all potentially affected Tribes is conducted on proposed management plans and actions, in compliance with Section 106 of the National Historic Preservation Act (NHPA). BLM actions will also comply with existing programmatic environmental analyses, land use plans, and other federal environmental legislation, such as the Clear Air Act, the Clean Water Act, and the Safe Drinking Water Act, and with state and local government regulations. Applicable laws, regulations, policies, and planning criteria can be reviewed in Appendix C, *Travel Management Plan* of the Proposed RMP/Final EIS.

2.1.7.4.1. U.S. Fish and Wildlife Service

As a part of this planning effort and in implementing on-the-ground activities, the BLM executed Endangered Species Act (ESA), Section 7 consultation with the USFWS. In 2001, the BLM and USFWS finalized a consultation agreement to establish an effective and cooperative ESA, Section 7 consultation process. A biological assessment (BA) was prepared and submitted to determine the effect of the Proposed Plan on all relevant listed, proposed, and candidate species, and associated critical habitat. All anticipated environmental effects, conservation actions, mitigation, and monitoring were disclosed in the BA, including analysis of all direct, indirect, and cumulative effects of the Proposed RMP/FEIS. The USFWS provided the BLM with a Biological Opinion of proposed actions on December 18, 2006 (Biological Opinion on the Effects of the Agua Fria NM and Bradshaw-Harquahala RMP on Federally-Listed Species, USFWS 22410-05-F-0785). As this plan's decisions are implemented, actions determined through environmental analysis to potentially affect species listed or candidate species for listing under ESA would trigger additional site-specific consultation on those actions.

2.1.7.4.2. Sikes Act

The Sikes Act (16 U.S.C. 670 et seq.) authorizes the Department of the Interior, in cooperation with state agencies responsible for administering fish and game laws, to plan, develop, maintain, and coordinate programs for conserving and rehabilitating wildlife, fish, and game on public lands within its jurisdiction. The plans must conform to overall land use and management plans for the lands involved. The plans could include habitat improvement projects and related activities and adequate protection for species of fish, wildlife, and plants considered endangered or threatened. The BLM must also coordinate with suitable state agencies in managing state-listed plant and animal species when the state has formally made such designations.

2.1.8. Related Plans

Title II, Section 202 of the FLPMA provides guidance for the land use planning process of the BLM to coordinate planning efforts with Native American Indian tribes, other federal departments, and agencies of state and local governments. To accomplish this directive, the BLM is instructed to keep informed of state, local, and tribal plans; assure that consideration is given to such plans; and to assist in resolving inconsistencies between such plans and federal planning. The section goes on to state in Subsection (c)(9) that "Land use plans of the Secretary [of the Interior] under this section shall be consistent with state and local plans to the maximum extent he finds consistent with Federal law and the purposes of this Act." The provisions of this section of the FLPMA are echoed in Section 1610.3 of BLM Resource Management Planning regulations.

In keeping with the provision of this section, state, local, and tribal officials were made aware of the planning process through the previously described mailings and meetings. The following is a list of plans reviewed during the AFNM Approved RMP planning effort:

- *Prescott National Forest Proposed Action: Forest Plan Amendment (November 2001)*
- *Yavapai County General Plan (April 2003)*
- *Maricopa Association of Governments: Desert Spaces Environmentally Sensitive Development Areas Policies and Design Guidelines (June 2000)*
- *Wildlife 2006: The Arizona Game and Fish Department's Wildlife Management Program Strategic Plan (January 2001)*
- *City of Phoenix General Plan (December 2001)*

- *Town of Prescott Valley General Plan (January 2002)*

2.1.9. Policy

This plan is consistent with and incorporates requirements identified in various laws, regulation and policy. These include Executive Orders, legislative designations, and court settlements/rulings. The policies and decisions that existed prior to this plan being written are outside the scope of the plan but have influenced the decisions, constrained the alternatives, and are needed to understand management of the area. Applicable laws, regulations, policies, and planning criteria can be reviewed in Appendix C of the Proposed RMP/Final EIS.

2.1.10. Mission and Goals

The BLM's mission is to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

BLM's mission for the AFNM is to protect and sustain the extraordinary combination of cultural, natural, and scientific resources within the monument. BLM will provide opportunities for scientific research, public education, recreation, and other activities that are consistent and compatible with resource protection. The AFNM will be managed to meet the following goals.

Natural and cultural resources and associated values are protected, restored, and maintained in good condition and managed within the broader context of ecosystems and cultural landscapes. The protection of cultural, biological, and physical resources, which the monument was created for, receives the highest priority in project planning and the management of resources and land uses.

Cultural resources are protected and managed for scientific, heritage, and educational values. Selected archaeological sites are developed for public visitation and interpreted to explain how humans have used and modified the desert grasslands over the past 2,000 years.

Diverse habitats, vegetation communities, and corridors of connectivity are conserved, and restored to sustain a wide range of native species. Habitats for special status and sensitive species are protected and recovered to support viable populations.

The Agua Fria River and its tributaries are managed to sustain and enhance their free-flowing character, water quality, and associated riparian values.

As a focus of scientific studies, the monument supports the following:

- relevant research priorities in the natural and social sciences,
- interdisciplinary studies, and
- development of effective resource management strategies.

Decisions about resource and visitor management are based on scientific information.

Visitors have opportunities to view scenic vistas, wildlife, and archaeological sites through a variety of appropriate and sustainable activities. The preservation of natural quiet and primitive settings is emphasized in zones possessing these values. The public receives the information needed to ensure safe and enjoyable experiences.

Facilities, such as parking areas and trails, are developed so they ensure visual enjoyment and public safety, while protecting monument values.

The public understands and appreciates the purpose and significance of Agua Fria National Monument and the benefits of protecting its resources for present and future generations.

BLM respects valid existing rights and manages authorized uses and facilities to protect monument resources.

BLM enters into active partnerships with local and regional communities, government agencies, Indian tribes, academic institutions, and organizations. These partnerships foster management practices that protect resources, support communities, and promote public education. Volunteers significantly contribute to resource protection, scientific studies, and public outreach.

2.2. Management Decisions

This section of the Approved RMP presents the Desired Future Conditions, Land Use Allocations, and Management Actions established for public lands managed by the BLM in the Agua Fria National Monument. Most of the Desired Future Conditions are long-range in nature and will not be achieved immediately, but rather are assumed to require a period of time to achieve. These management decisions are presented by program area. Not all types of decisions were identified for each program.

Implementation or activity level decisions are decisions that take action to implement land use plan decisions. These types of decisions require appropriate site-specific planning and NEPA analysis. Implementation decisions generally constitute BLM's final approval allowing on-the-ground actions to proceed and are generally appealable to the Interior Board of Land Appeals (IBLA) under 43 CFR 4.410. This Approved RMP contains appealable implementation decisions for route designations in conjunction with a Travel Management Plan for the monument. Otherwise, this RMP does not identify implementation decisions. However, some decisions listed within this section will be incorporated into future implementation (activity- or project-level) plans. These implementation plans will provide the required additional site-specific planning and NEPA analysis. At that time, the decisions will become appealable. The appeal process will be listed in the future individual implementation plans.

Through adaptive management, monitoring plans will ensure that Land Use Allocations and Management Actions achieve Desired Future Conditions. The content of the decisions remains as contained in the Proposed RMP, except as described in the Modifications and Clarifications sections of the ROD.

Data used in development of the Approved RMP are dynamic. The data and maps used throughout the Approved RMP are for land use planning purposes and will be refined as site-specific planning and on-the-ground implementation occur. Updating data is considered plan maintenance that will occur over time as the Approved RMP is implemented. Please note that all acreages presented in the Approved RMP are estimations, even when presented to the nearest acre.

Complete consideration of the Approved RMP also includes Administrative Actions and Standard Operating Procedures (which are presented in Appendix B, *Administrative Actions and Standard Operating Procedures*). These actions and procedures outline the objectives, basic management policy, and program direction. Administrative Actions are not land use plan decisions. However,

these are day-to-day activities that are not ground-disturbing and are an important component when considering program activities.

This section is organized alphabetically by program area. The decisions for each program are coded and numbered consecutively to reflect the primary resource that is affected. The codes are presented below.

- Biological Resources
 - Special Status Species (TE)
 - Wildlife and Fisheries (WF)
 - Vegetation (VM)
 - Riparian (RP)
- Cultural Resources (CL)
- Fire Management (FM)
- Land Health Standards (LH)
- Lands and Realty Management (LR)
- Mineral Resources (MI)
- Paleontological Resources (GL)
- Rangeland Management/Grazing (GM)
- Recreation Management (RR)
- Soil, Air, and Water Resources (WS)
- Special Designations
 - Wild and Scenic Rivers (WR)
- Travel Management (TM)
- Visual Resource Management (VR)
- Wilderness Characteristics (WC)

2.2.1. Biological Resources

The areas of consideration are the management of special status species, wildlife and fish habitat, and vegetation and riparian management. Conservation measures for the Agua Fria National Monument were derived from all applicable Recovery Plans, Conservation Plans, and Management Plans available for species within the planning area.

2.2.1.1. Special Status Species

2.2.1.1.1. Special Status Species (TE)

2.2.1.1.1.1. Desired Future Conditions

2.2.1.1.1.1.1. Desert Tortoise

TE-1. Desert tortoise habitat, by habitat category, will be managed to achieve the following desired conditions:

- Category I - Maintain stable, viable populations and protect existing tortoise habitat values and increase populations where possible,
- Category II - Maintain stable, viable populations and halt further declines in tortoise habitat values, and

- Category III - Limit tortoise habitat and population declines to the extent possible through mitigation.

TE-2. Categories I and II desert tortoise habitat will be managed to retain all natural shelter sites (boulders or caliche caves or similar features used by tortoises for sheltering) and to be unfragmented.

TE-3. In Category I and II areas, vegetation will consist of at least 5 percent native perennial grasses, at least 10 percent native perennial forbs or subshrubs, at least 30 percent native trees and cacti, by dry weight, as limited by the potential of the ecological site as described by the Natural Resource Conservation Service (NRCS) ecological site guides.

2.2.1.1.1.1.2. Gila Topminnow, Gila Chub, and Desert Pupfish

TE-4. All biologically suitable perennial waters on public lands are occupied by thriving populations of Gila topminnow, Gila chub, and desert pupfish.

2.2.1.1.1.1.3. Spikedace

TE-5. The Agua Fria River, where biologically suitable, is occupied by a thriving population of spikedace.

2.2.1.1.1.1.4. Southwestern Willow Flycatcher

TE-6. Riparian areas that could physically support (due to floodplain width and gradient) southwestern willow flycatcher habitats will attain the vegetation structure, plant species diversity, density, and canopy cover to constitute suitable habitat. Vegetation in these riparian areas will be sufficiently dense and structurally complex to inhibit flycatcher predators and cowbirds from finding flycatcher nests. Livestock management facilities or other facilities will not be located so that they would attract cowbirds to suitable flycatcher habitat.

2.2.1.1.1.1.5. Bald Eagle

TE-7. Habitat quality and quantity of riparian areas within the foraging range of bald eagles in the Lake Pleasant area is maintained and nesting and habitat for wintering birds in the Agua Fria River drainage is maintained. Sufficient quantity and quality of these riparian areas provide roosting and potential nesting trees and adequate prey.

2.2.1.1.1.1.6. Yellow-billed Cuckoo

TE-8. Riparian areas that could physically support (due to floodplain width and gradient) yellow-billed cuckoo habitats will attain the vegetation structure, plant species diversity, density, and canopy cover to constitute suitable habitat. Livestock utilization will not substantially reduce the abundance, density or distribution of native riparian tree species through herbivory.

2.2.1.1.1.2. Land Use Allocations

TE-9. Desert tortoise habitat will be managed according to the three categories shown on Map 2 . Habitat management categories and boundaries will be revised as new population information

becomes available. The criteria that will be used in revising categories and boundaries are those in the 1988 Range-wide Plan (BLM 1988).

The criteria for defining Category I tortoise habitat areas are the following:

- Habitat areas are essential to maintenance of large, viable populations.
- Populations are increasing, stable, or decreasing.
- Conflicts are resolvable.
- Populations are medium to high density or low density contiguous with medium or high density.

The criteria for defining Category II tortoise habitat areas are the following:

- Habitat areas may be essential to maintenance of viable populations.
- Most conflicts are resolvable.
- Populations are medium to high density or low density contiguous with medium or high density.
- Populations are stable or decreasing.

Category III tortoise habitat areas are the following:

- Habitat areas are not essential to maintenance of viable populations.
- Most conflicts are not resolvable.
- Populations are low to medium density not contiguous with medium or high density.
- Populations are stable or decreasing.

2.2.1.1.1.3. Management Actions

2.2.1.1.1.3.1. Desert Tortoise

Desert tortoise management will be consistent with the following documents:

- Desert Tortoise Habitat Management on Public Lands: A Rangewide Plan (BLM 1988b).
- Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona, Instruction Memorandum No. AZ-91-16 (BLM 1990a),
- Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona: New Guidance on Compensation for the Desert Tortoise, Instruction Memorandum No. AZ-92-46 (BLM 1992), and
- Supplemental Guidance for Desert Tortoise Compensation, Instruction Memorandum No. AZ-99-008 (BLM 1999).

TE-10. No net loss will occur in the quality or quantity of Category I and II desert tortoise habitat to the extent practicable. BLM will address and include mitigation measures in decision documents to offset the loss of quality or quantity of Category I, II, and III tortoise habitats .

TE-11. Compensation may be required to mitigate residual impacts from authorized actions.

TE-12. Evaluate on a case-by-case basis all proposed activities, including the following, for impacts to desert tortoise population or habitats:

- range improvements,
- wildlife habitat projects,
- commercial and organized group SRP applications.

TE-13. Mitigation for adverse impacts is permissible to achieve no net loss in quantity or quality of desert tortoise habitat.

2.2.1.1.3.2. Threatened or Endangered Species

The actions described below implement the relevant Terms and Conditions and Conservation Recommendations contained in the following Biological Opinions and Conference Opinion:

- [2-21-88-F-167] The Phoenix Resource Management Plan and Environmental Impact Statement.
- [2-21-96-F-421] The Lower Gila North Management Framework Plan (1983), and Lower Gila North Grazing EIS (1982).
- [2-21-96-F-422] The Eastern Arizona Grazing EIS, Phoenix District Portion.
- [2-21-99-F-031] Reintroduction of Gila Topminnow and Desert Pupfish into Three Tributaries of the Agua Fria River.
- [2-21-03-C-409] Existing Phoenix Resource Management Plan for the Agua Fria National Monument.
- [2-21-03-F-210] BLM Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management.

TE-14. Acquisition criteria for non-Federal lands will include lands with the potential to:

- enhance the conserving and managing of threatened or endangered species habitat, riparian habitat, desert tortoise habitat, key big game habitat, and
- improve the overall manageability of wildlife habitat .

TE-15. BLM will not transfer from Federal ownership the following types of lands:

- designated or proposed critical habitat for a listed or proposed threatened or endangered species,
- lands supporting listed or proposed threatened or endangered species if such transfer would be inconsistent with recovery needs and objectives or would likely affect the recovery of the listed or proposed species, and
- areas supporting Federal candidate species candidate species if such action would contribute to the need to list the species as threatened or endangered.

TE-16. Wildlife and prescribed fire management will incorporate the T/E Species Conservation Measures described in Appendix P which resulted from the BLM Arizona Statewide Land Use Plan Amendment for Fire, Fuels, and Air Quality Management (BO #2-21-03-F-210).

2.2.1.1.3.3. Gila Topminnow, Gila Chub, and Desert Pupfish

TE-17. In cooperation with the Arizona Game and Fish Department and the U.S. Fish and Wildlife Service, BLM will re-establish Gila topminnow, Gila chub, and desert pupfish into suitable habitat sites throughout the planning area.

TE-18. Stream bank alteration due to recreation activities and livestock grazing in areas occupied by Gila topminnow, Gila chub, and desert pupfish will be limited to 25 percent annually.

TE-19. Domestic livestock utilization of native riparian trees seedlings along streams occupied by Gila chub, Gila topminnow, and desert pupfish will be limited to 30 percent of the apical stems per growing season.

TE-20. Fuels treatments on watersheds for habitat occupied by Gila topminnow, Gila chub, and desert pupfish will be limited to no more than 1/2 the watershed in any 2-year period.

2.2.1.1.3.4. Spikedace

TE-21. In cooperation with the Arizona Game and Fish Department and the U.S. Fish and Wildlife Service, the BLM will re-establish a spikedace population in the Agua Fria River.

2.2.1.1.3.5. Southwestern Willow Flycatcher

TE-22. Within the range of southwestern willow flycatcher, livestock grazing will conform to the guidelines described in the "Not Likely to Adversely Affect" section of Guidance Criteria for Determinations of Effects of Grazing Permit Issuance and Renewal on Threatened and Endangered Species (BLM and US Fish and Wildlife Service, Arizona and New Mexico 1999) or any subsequent agreed-upon amendment to these guidelines.

The current guidance criteria for Not Likely to Adversely Affect states:

1. Disturbance of individuals or nests, predation, or parasitism would not be likely because livestock use would not occur in occupied habitat during any time of the year.
2. Suitability for nesting flycatchers would not be reduced because livestock grazing in unoccupied suitable habitat would not occur during the growing season (key vegetation characteristics are maintained or enhanced and conditions promoting cowbird parasitism are avoided).
3. Cowbird parasitism would be unlikely because grazing would occur greater than five miles from occupied habitat during the breeding season, or
4. Monitoring of flycatcher nests demonstrates that no cowbird parasitism is occurring when livestock use occurs closer than 5 miles, but not within, occupied habitat, or
5. Cowbird parasitism would be unlikely due to the physical juxtapositions of habitat type, terrain, facilities, elevation, and other factors.
6. Progression of potential habitat towards becoming suitable within 10 years would not be impeded by livestock grazing (e.g. regeneration or maintenance of woody vegetation is not impaired by trampling, bedding, or feeding).
7. Sufficient monitoring is in place to demonstrate that habitat suitability is being maintained or enhanced in accordance with two and four above. Such monitoring would continue through the life of the grazing action under consideration.

TE-23. Conservation of Federal threatened or endangered, proposed, candidate, and other special status species is promoted by maintaining or restoring their habitats.

2.2.1.2. Wildlife and Fisheries (WF)

2.2.1.2.1. Desired Future Conditions

WF-1. Maintain, restore, or enhance the diversity, distribution, and viability of populations of native wildlife, and maintain, restore, or enhance overall ecosystem health. Discretionary activities will be managed to ensure connectivity of habitats and maintenance of unrestricted wildlife movement.

WF-2. The distribution and abundance of invasive animals will be contained, and through active management, the impact of invasive species on native ecosystems will be reduced from current levels.

WF-3. Manage habitat to avoid fragmentation and provide conditions that promote natural movement and fawning behavior of pronghorn.

WF-4. Restore and maintain habitat of suitable quality and quantity to promote long-term sustainability of a viable pronghorn population.

2.2.1.2.2. Land Use Allocations

WF-5. Pronghorn Fawning Habitat Wildlife Habitat Area (16,810 acres), shown on Map 3 .

WF-6. Pronghorn Movement Corridor Wildlife Habitat Area (22,520 acres) (Map 3).

2.2.1.2.3. Management Actions

WF-7. Emphasize and give priority to managing priority species and priority habitats in the event of conflicts between resource management objectives. Priority species include the following, as specified in Appendix H of the Proposed RMP:

- game species,
- special status species,
- birds of conservation concern, and
- raptors.

Priority habitats include areas allocated as WHAs (pronghorn fawning habitat, pronghorn movement corridors, and bighorn sheep habitat), ACECs, riparian areas, springs, bat roosts, and desert tortoise habitat

WF-8. Reintroductions, transplants, and supplemental stockings (augmentations) of wildlife populations will be carried out in collaboration with AGFD or the USFWS for the following purposes:

- to maintain current populations, distributions, and genetic diversity,
- to conserve or recover threatened or endangered species, and
- to restore or enhance native wildlife species diversity and distribution.

Species that may be reintroduced, transplanted, or augmented include but are not limited to pronghorn; desert bighorn sheep; mule deer; desert tortoise; beavers; lowland leopard frogs; Mexican garter snakes; and native fishes like spikedace, Gila chub, Gila topminnow, desert pupfish, longfin dace, speckled dace, and desert sucker.

WF-9. Management of habitat for Birds of Conservation Concern will emphasize avoidance or minimizing impacts and restoring and enhancing habitat quality to implement Executive Order 13186. Through the permitting process for all land use authorizations, ensure the maintenance of habitat quantity and quality. Take (as defined in the Glossary) of migratory birds from authorized activities will be minimized or avoided.

WF-10. Identify, minimize, and mitigate for wildlife habitat degradation, loss, and fragmentation to achieve Desired Future Conditions.

WF-11. The density and distribution of wildlife waters will be maintained, improved, or increased throughout the planning areas to sustain and enhance wildlife populations across their range.

WF-12. All existing wildlife waters will be maintained or improved as needed to maintain the presence of perennial water for wildlife.

WF-13. New wildlife waters will be built when needed to maintain, restore, or enhance native wildlife populations or distributions.

WF-14. Reasonable administrative vehicular access will be allowed for AGFD staff to wildlife water facilities for maintenance, repair, or research.

WF-15. Water developments, including those for purposes other than wildlife, will include design features to ensure safe and continued access to water by wildlife.

WF-16. The area contains suitable habitat for relocating and releasing individual animals and release of rehabilitated wildlife. These types of wildlife releases are not intended to establish new populations but are appropriate in areas of suitable habitat. Wildlife species that can be released include but are not limited to black bears; mountain lions; burrowing owls; and other raptors, reptiles, and game species.

WF-17. The evaluation of vehicle routes, in conjunction with the route designation process, will consider the effect of routes on wildlife habitat values. Routes that conflict with maintaining sensitive wildlife habitat will be mitigated to achieve DFC. Mitigation will include, but not be limited to the following:

- route closure,
- seasonal use restrictions,
- rerouting,
- vehicle type restrictions,
- vehicle speed restrictions, and
- other mitigation suitable to the nature of the conflict.

WF-18. Administrative access will be allowed by law for enforcement and AGFD and USFWS staff for natural resource management. AGFD's use of motorized and mechanized equipment off designated routes is considered an administrative use and will be allowed in suitable locations (as agreed to by BLM and AGFD) for such purposes including, but not limited to the following:

- water supplementation,
- collar retrieval,
- capture and release of wildlife, and
- maintenance, repair, and building or rebuilding of wildlife waters.

WF-19. To ensure achievement of DFC, limit or suitably mitigate vehicle routes that:

- cross known pronghorn movement corridors, and
- have a type and volume of use that modifies pronghorn behavior in ways that fragment their habitat or adversely affect fawning.

WF-20. Implement seasonal restrictions or closures when vehicle use degrades habitat values.

WF-21. Adverse impacts to native animal communities from invasive species will be reduced. Efforts to control or eradicate invasive wildlife species will be carried out in cooperation and collaboration with AGFD or other organizations.

WF-22. Apply prescribed fire and fuels management projects to improve habitat for pronghorn fawning and movement.

WF-23. Fence construction and maintenance will follow guidance provided in BLM's Handbook for Fencing H-1741. **WF-24.** Limit or suitably mitigate new recreation site developments in pronghorn movement corridors to avoid disturbing pronghorn movement.

WF-25. Close pronghorn fawning areas to Special Recreation Permit activities between April 1 and June 1 annually.

WF-26. Maintenance of wildlife habitat will be given management priority in resolving resource conflicts.

WF-27. Management actions will be conducted in a manner that protects the values of bat roost habitats associated with natural caves and abandoned mine features, while ensuring that these sites do not pose a threat to human safety.

2.2.1.3. Vegetation and Riparian Management (VM)

2.2.1.3.1. Desired Future Conditions

VM-1. Maintain, restore, or enhance the diversity, distribution, and viability of populations of native plants, and maintain, restore, or enhance overall ecosystem health.

VM-2. The distribution and abundance of invasive plants will be contained, and through active management, the impact of invasive species on native ecosystems will be reduced from current levels.

VM-3. All upland areas will include:

- a plant community that consists of native perennial grass and ground cover adequate to improve wildlife habitat and
- improved watershed function based on monitoring and ecological site potential. Upland sites include five percent or greater dry-weight composition of native perennial grass, as limited by the potential of the ecological site as described by the Natural Resource Conservation Service (NRCS) ecological site guides.

VM-4. The desired plant community for upland sites will have a long-term stable population of columnar cacti and paniculate agave, where the sites have the potential for such plant communities.

RP-1. Riparian areas will include a plant community that consists of stream banks dominated (> 50 percent) by native species from the genera *Scirpus*, *Carex*, *Juncus*, and *Eleocharis*. The size class distribution of native riparian obligate trees will be > 15 percent seedlings, > 15 percent mid-size, and > 15 percent large size (depending on existing conditions and the site potential). Size classes are defined as follows:

- Seedlings are < 1 inch in basal diameter.
- Mid-sizes are 1 to 6 inches in basal diameter.
- Large sizes are > 6 inches in basal diameter.

2.2.1.3.2. Management Actions

VM-5. Adverse impacts to native plant communities from invasive species will be reduced. Efforts to control or eradicate invasive wildlife species will be carried out in cooperation and collaboration with suitable weed management associations or other organizations.

VM-6. Fuels reduction projects may include provisions for permitting firewood collection on a case-by-case basis.

VM-7. Written authorization from the monument manager is needed for collecting plant materials for scientific purposes.

VM-8. Prohibit all other vegetation collection or removal.

VM-9. The use and perpetuation of native plant species will be emphasized when restoring or rehabilitating disturbed or degraded rangelands.

VM-10. Nonintrusive, non-native plant species will be considered suitable where native species:

- are not available,
- are not economically feasible,
- cannot achieve ecological objectives as well as non-native species, and
- cannot compete with already established non-native species.

2.2.2. Cultural Resources (CL)

2.2.2.1. Desired Future Conditions

CL-1. Cultural resources are being used to enhance scientific and public knowledge and understanding of the monument region during prehistoric and historic periods, while at the same time they are being preserved for future generations as well. Partnerships and volunteers are utilized to support these objectives and management actions. Selected sites are allocated to public use and interpreted to further public knowledge, enjoyment, and stewardship of cultural heritage values.

2.2.2.2. Land Use Allocations

CL-2. Allocate cultural sites to one or more of the six use categories, defined in BLM Manual 8110.4:

- scientific use,
- conservation for future use,
- traditional use,
- public use,
- experimental use, and
- discharged from management.

Manage sites in accordance with the guidelines in BLM Manual 8110.4, Identifying and Evaluating Cultural Resources. Refer to Appendix E in the Proposed RMP/FEIS for more detailed descriptions of use categories.

CL-3. Scientific Use allocations: Permit scientific and historical studies by qualified researchers at selected sites allocated to scientific use. The highest priority for study will be assigned to significant sites that are threatened by vandalism or other types of disturbance. Scientific studies will be guided by historic contexts and research designs. Priorities will also emphasize sites that have the potential to yield important information, as defined in approved research designs.

CL-4. Public Use allocations: Allocate selected sites to public use for long-term preservation and public visitation. Consider the following factors in selecting sites suitable for this type of use:

- presence of aboveground features, such as structures or rock art, that are of interest to the public and are amenable to interpretive development,
- the condition of the site and the feasibility of treating or stabilizing selected areas to withstand visitation,
- accessibility to travel routes, and
- visitor safety.

CL-5. Allocate the following sites to the category of Conservation for Future Use:

- Rattlesnake Pueblo and other prehistoric masonry structures in the back country region south of Perry Tank Canyon,
- all rock art sites larger than a single, isolated boulder, and
- the historic stone features at Arizona N: 16:70 (MNA), the Arrastre Creek site.

CL-6. Allocate to Traditional Use sites that are perceived by a specified social or cultural group as important in maintaining the cultural identity, heritage, or well being of the group.

CL-7. The use category of “Discharged from Management” will be applied in a limited manner, consistent with the protection of monument resources and the cultural landscape of the Perry Mesa National Register District. This allocation will be applied mainly to properties that have lost their heritage values through the following:

- damage or destruction by natural processes,
- unauthorized activities, and
- actions conducted before the monument was established in 2000.

2.2.2.3. Special Cultural Resource Management Areas (SCRMA) for Public Use Allocations

These areas are defined as appropriate for varying levels of interpretation and development associated with public use allocations. SCRMA are shown on Map 4 .

CL-8. High Use SCRMA (2,056 acres).

Sites allocated to public use within this SCRMA are:

- Pueblo la Plata and Fort Silver (Pueblo la Plata complex), north of Bloody Basin Road on Perry Mesa.
- Historic Teskey homestead near the Agua Fria River.

CL-9. Moderate Use SCRMA (8,100 acres).

Sites allocated to public use within this SCRMA are:

- Baby Canyon Pueblo and Pueblo Pato on Perry Mesa.
- Badger Springs rock art and the Arrastre Creek site on Black Mesa.

- Prehistoric sites on the south rim of Black Mesa.
- Rollie Site (AZ N:16:231(ASM)) near Sunset Point on Black Mesa.

CL-10. Low Use SCRMA (60,750 acres).

All remaining areas outside the high and moderate use SCRMA's will be excluded from on-the-ground interpretive development or commercial tours. No sites are allocated to public use in these areas.

2.2.2.3.1. Management Actions

CL-11. Implement physical and administrative protection measures to stop, limit, or repair damage and vandalism to sites. A variety of protection measures, described in BLM's Manual 8140, may be used to protect the integrity of specific sites at risk:

- closing routes,
- restricting grazing or other uses,
- building fences or other barriers,
- installing erosion control devices,
- placing soil into exposed vandal pits or rooms,
- erecting signs, and
- repairing, shoring up, or stabilizing walls or other parts of structures.

CL-12. Install and maintain protective signs, including carsonite posts, with the message of the Arizona Site Steward Program on sites that are vulnerable to vandalism. Install protective signs in a manner to avoid drawing attention to sites.

CL-13. In evaluating project designs and proposed activities, seek to avoid disturbing or removing Native American human remains and associated items. Avoid directing site visitors toward areas where these items could be observed or disturbed.

CL-14. Include stipulations in Special Recreation Permits (SRPs) to ensure that commercial tour operations will not damage cultural resources. Require tour operators to report any new vandalism or damage to sites.

CL-15. Limit groups visiting archaeological sites to 25 people per site at a time. BLM may permit larger groups on a case-by-case basis for educational events, if it implements mitigation to minimize adverse impacts.

CL-16. Design and maintain facilities to preserve the visual integrity of cultural resource settings and cultural landscapes consistent with visual resource management objectives established in the RMP.

CL-17. At sites allocated to conservation for future use, scientific studies will normally be limited to surveys, mapping, and other noninvasive documentation methods. The BLM will preserve the integrity of these sites and their settings through use restrictions and protective measures. Following BLM's Manual 8110, the BLM could specify provisions that will allow for scientific excavations, under limited circumstances. The permit applicant would need to justify why this work would be a critical component of an approved research design, and why the needed information could not be obtained elsewhere in the monument.

CL-18. Scientific use allocations will allow for the following data collection procedures:

- detailed documentation through such techniques as inventory, mapping, photography, photogrammetry, and remote sensing,
- sample collections of artifacts,
- collections of samples for chronological and environmental analyses, such as radiocarbon, archaeomagnetic, soil, pollen, and flotation analyses, and
- limited excavations, consistent with approved research designs.

CL-19. Scientific studies may be conducted for the following purposes:

- to obtain critical data relevant to research objectives,
- to assess site protection and stabilization needs, and
- to support interpretive planning for properties also allocated to public use.

CL-20. Research plans will ensure that a majority of architectural features and cultural deposits remain intact (not intentionally disturbed) at habitation sites with multiple rooms. Protection will remain a priority for sites that have been allocated to scientific uses.

CL-21. Assign a high priority for detailed documentation to the following sites:

- Pueblo la Plata, Fort Silver, Baby Canyon Pueblo, and Pueblo Pato.
- Rock art sites on Black Mesa and along Baby Canyon and Perry Tank Canyon on Perry Mesa.
- The remnants of the historic Richinbar Mine water delivery system in the Agua Fria River Canyon.

CL-22. Tailor management actions to public use allocations within Special Cultural Resource Management Areas. The degrees of interpretive development within these areas will be consistent with allocations of High or Moderate levels of use. Sites will not be allocated to public use within areas set aside for low use. Actions that could be implemented at or near selected sites in each level of use area are described as follows.

2.2.2.3.1.1. Potential Management Actions for Special Cultural Resource Management Areas

CL-23. High Public Use SCRMA's

- Building visitor facilities, which may include gravel parking areas, restrooms, picnic tables, trash receptacles, and benches.
- Improving routes with signs installed along vehicle routes to direct visitors to interpreted sites and visitor facilities. Routes would not be paved.
- Closing routes within 1/4 to 1/2 mile of sites, with single- and two-track routes converted to non-motorized use to improve visitor flow and site protection.
- Establishing hardened walking trails.
- Installing interpretive signs and visitor register boxes.
- Conducting limited excavations, backfilling pueblo rooms, or stabilizing walls to protect or display portions of sites.
- Establishing interpretive loop trails connecting archaeological sites and natural features. Non-motorized or motorized trail systems could be linked to sites in Tonto National Forest.
- Preparing brochures and other educational materials or programs focused on sites.
- Showing site locations on maps, monument brochures, and BLM's websites.
- Authorizing commercial and other group tours, conducted in accordance with special SRPs.

CL-24. Moderate Public Use SCRMA's

- Installing interpretive signs and visitor register boxes.

- Establishing non-motorized trails, including hardened walking trails.
- Closing existing trails within 1/4 to 1/2 mile from sites to vehicles and converting to non-motorized use to improve site protection.
- Producing fact sheets or brochures.
- Providing limited publicity and limited access for commercial tours.
- Placing emphasis on conveying an experience of discovery.

CL-25. Low Public Use SCRMA

- Allocating no sites to public use for interpretive development.
- Installing no interpretive signs or facilities.
- Building no trails.
- Developing no fact sheets or interpretive media about specific sites.
- Issuing no special recreation permits for commercial tours.
- Publicizing and showing no sites on maps and brochures.
- Allowing hikers and other visitors to experience a sense of discovery by encountering and observing undeveloped sites in pristine settings.

2.2.3. Fire Management (FM)

2.2.3.1. Desired Future Conditions

FM-1. Fire is recognized as a natural process in fire-adapted ecosystems and is used to achieve objectives for other resources.

FM-2. Fuels in the Wildland Urban Interface (WUI) are maintained at non-hazardous levels to provide for public and firefighter safety.

FM-3. Prescribed fire complies with Federal and State air quality regulations.

FM-4. Each vegetation community is maintained within its natural range of variation in plant composition, structure, and function, and fuel loads are maintained below levels that are considered to be hazardous (See Table 2-7 and Appendix J in the Proposed RMP/FEIS for more information on each vegetation community).

FM-5. DFCs will be coordinated with the rangeland standard and guidelines allotment evaluations.

2.2.3.2. Land Use Allocations

BLM-administered lands will be assigned to one of the following two land use allocations for fire management.

FM-6. Allocation One - Wildland Fire Use: Areas suitable for wildland fire use for resource management benefit.

In these areas, where wildland fire is desired, few or no constraints exist on its use, and conditions are suitable, unplanned and planned wildfire may be used to achieve desired objectives such as the following:

- to improve vegetation, wildlife habitat, or watershed conditions,
- to maintain non-hazardous levels of fuels,

- to reduce the hazardous effects of unplanned wildland fires, and
- to meet resource objectives.

Where fuel loading is high but conditions are not initially suitable for wildland fire, fuel loads are reduced by mechanical, chemical, or biological means to reduce hazardous fuel levels and meet resource objectives (includes WUI areas).

FM-7. Allocation Two - Non Wildland Fire Use: Areas not suitable for wildland fire use for resource benefit.

This allocation includes areas such as the following, where mitigation and suppression are required to prevent direct threats to life or property:

- areas where fire historically never played a large role in developing and maintaining the ecosystem,
- areas where intervals between fires were very long, and
- areas (including some WUI areas) where an unplanned ignition could harm the ecosystem unless some form of mitigation is applied.

Mitigation may include mechanical, biological, chemical, or prescribed fire means to maintain non-hazardous levels of fuels, reduce the hazardous effects of unplanned wildland fires, and meet resource objectives. The allocation of lands is based on the DFC of vegetation communities, ecological conditions, and ecological risks.

The allocation of lands is determined by contrasting current and historical conditions and ecological risks of any changes (Map 5 , Fire Land Use Allocation). The condition class concept helps describe changes in key ecosystem components such as species composition, structural stage, stand age, canopy closure, and fuel loadings. BLM fire management plans will include the two allocations and identify areas for including fire use and mechanical, biological, or chemical means to:

- maintain non-hazardous levels of fuels,
- reduce the hazardous effects of unplanned wildland fires, and
- meet resource objectives.

Fire management plans will also determine which areas will be excluded from fire (through fire suppression) and which will receive chemical, mechanical, or biological treatments.

2.2.3.3. Management Actions

FM-8. Use suitable tools for reducing hazardous fuels, including prescribed burning, wildland fire use, and mechanical methods. Methods can include the following:

- chainsaws,
- motorized equipment for crushing brush,
- tractor and hand piling,
- thinning and pruning, and
- treatments selected on a site-specific case that are ecologically suitable and cost effective.

FM-9. In areas not suitable for fire, BLM will implement programs to reduce unwanted ignitions and emphasize prevention, detection, and rapid suppression response.

FM-10. In areas not suitable for fire where fuel loading is high, BLM will use biological, mechanical, or chemical treatments and some prescribed fire to maintain non-hazardous levels of fuels and meet resource objectives.

FM-11. In areas suitable for fire where fuel loading is high and current conditions constrain fire use, BLM will emphasize prevention and mitigation programs to reduce unwanted fire ignitions and use mechanical, biological, or chemical treatments to mitigate the fuel loadings and meet resource objectives.

FM-12 In areas suitable for fire where conditions allow, BLM will do the following:

- allow naturally ignited wildland fire,
- use prescribed fire and a combination of biological, mechanical, and chemical treatments to maintain nonhazardous levels of fuels,
- reduce the hazardous effects of unplanned wildland fires, and
- meet resource objectives.

FM-13. In areas suitable for fire, BLM will monitor existing air quality levels and weather conditions to determine which prescribed fires can be ignited and which, if any, must be delayed to ensure that air quality meets Federal and State standards. If air quality approaches unhealthy levels, BLM would delay igniting prescribed fires.

FM-14. To reduce human-caused fires, BLM will undertake education, enforcement, and administrative fire prevention mitigation measures. Education measures will include the following:

- provide media information, including a signing program,
- give the public information on the natural role of fire within local ecosystems, and
- participate in fairs, parades, and public contacts.

FM-15. Enforcement staff will train employees interested in determining the cause of fires. Administration will include expanded prevention and education programs with cooperator agencies.

FM-16. Firefighter and public safety are the first priority in every fire management activity. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources must be based on the following:

- values to be protected,
- human health and safety, and
- costs of protection.

FM-17. For all fire management activities (wildfire suppression; appropriately managed wildfire use; prescribed fire; and mechanical, chemical, and biological vegetation treatments), conservation measures will be implemented as part of the proposed action to provide statewide consistency in reducing the effects of fire management on federally protected (threatened, endangered, proposed, and candidate) species.

FM-18. Conservation measures noted as “recommended” are discretionary for implementation but are recommended to help minimize effects to federally protected species. Incorporated here by reference are procedures within the Interagency Standards for Fire and Fire Aviation Operations (Task Group 2004), including future updates, relevant to fire operations that may affect federally protected species or their habitat.

FM-19. During fire suppression, resource advisors may be designated to coordinate concerns on federally protected species and to serve as liaison between the field office manager and the incident commander and the incident management team. Resource advisors will also serve as field contact representatives responsible for coordinating with the USFWS. Resource advisors will have the needed information on federally protected species and habitats in the area and the available conservation measures for the species. They will be briefed on the intended suppression actions for the fire and will provide input on which conservation measures are suitable within the standard constraints of safety and operational procedures. The incident commander has the final decision making authority on implementation of conservation measures during fire suppression.

FM-20. Conflicts may occur in attempting to implement all conservation measures for every species potentially affected by a particular activity, because of the number of species within the action area for the proposed statewide land use plan amendment (BLM 2004); and the variety of fire suppression and proposed fire management activities. Implementing these conservation measures will depend on:

- the number of federally protected species, and
- their individual life histories or habitat requirements within a particular location that is being affected by either fire suppression or a proposed fire management activity.

Conflicts could particularly arise from timing restrictions on fuel treatment if the ranges of several species with differing restrictions overlap. It could therefore, be impossible to effectively implement the activity. Resource advisors (in coordination with USFWS), fire management officers, incident commanders, and other resource specialists will need to coordinate to determine which conservation measures will be implemented during a particular activity. If conservation measures for a species cannot be implemented, BLM will be required to initiate Section 7 consultation with USFWS for that activity.

FM-21. LM will update local fire management plans to include site-specific actions for managing wildfire and fuels in accordance with the new Federal fire policies, based on guidance provided in the decision records for statewide land use plan amendments (BLM 2004). These plans will be coordinated with USFWS and the AGFD to address site-specific concerns for federally protected species. These plans will incorporate the conservation measures included in this statewide land use plan amendment for federally protected species occurring within each fire management zone. BLM will consult with USFWS on these project-level plans, as needed.

FM-22. Categories A, B, C, and D, polygons are referenced in the 1998 Fire Management Plan (FMP). The FMP was updated in 2007 and has fire management units containing polygons based on the following:

- vegetation communities,
- fire regime condition classes, and
- closeness to urban interface areas.

FM-23. As a fuels management tool, BLM uses prescribed fire and mechanical treatment to maintain semi-desert grasslands in Agua Fria National Monument. BLM has designated 24 burn units, encompassing 50,000 acres, to receive treatment on a 5- to 10-year rotation. Prescribed fire in this area is coordinated closely with similar projects conducted by Prescott and Tonto National Forests to provide an ecosystem-wide effort to maintain the Agua Fria grasslands. Resource objectives under the current fire management plan include the following:

- reducing woody species,
- increasing ground cover,

- increasing perennial grass cover and production,
- increasing annual grass and forb production, and
- improving pronghorn antelope habitat.

FM-24. Fire management activities in Agua Fria National Monument will ensure that no adverse effects occur to the resources listed in the proclamation as the reasons for establishing the area.

FM-25. Fire management efforts along river segments recommended as suitable for designation under the WSR Act will use measures that avoid degrading the outstandingly remarkable values that qualify the rivers for designation.

FM-26. Wildfires resulting from natural fire starts (lightning) from an adjoining ownership may be allowed to cross jurisdictional boundaries if the fire meets predetermined, prescription criteria, and the ownerships have an agreement.

2.2.4. Land Health Standards (LH)

2.2.4.1. Desired Future Conditions

In managing and implementing all resource programs, BLM must consider the Land Health Standards described in Arizona Standards for Rangeland Health and Guidelines for Grazing Administration. The Land Health Standards were developed, pursuant to 43 CFR 4180, through a collaborative process involving BLM's staff and the Arizona Resource Advisory Council (RAC). The Land Health Standards were approved by the Secretary of the Interior in April 1997. These standards have been developed to determine the characteristics of healthy ecosystems on public lands and management actions to promote them. When approved, the Land Health Standards became BLM Arizona policy, guiding the planning for and management of BLM-administered lands. The Land Health Standards, therefore, have been incorporated into this Approved RMP. Listed below are the standards that describe the desired conditions needed to encourage proper functioning of ecological processes. These standards guide the management actions for all resource programs.

2.2.4.1.1. Standard One: Upland Sites

LH-1. Upland soils exhibit infiltration, permeability, and erosion rates that are appropriate to soil type, climate, and landform (ecological site).

Criteria for Meeting Standard One

Soil conditions support the proper functioning of hydrologic, energy, and nutrient cycles. Many factors interact to maintain stable soils and healthy soil conditions, including suitable amounts of vegetation cover, litter, and soil porosity and organic matter. Under proper functioning conditions, rates of soil loss and infiltration are consistent with the site's potential.

Ground cover in the form of plants, litter, or rock is present in pattern, kind, and amount sufficient to prevent accelerated erosion for the ecological site; or ground cover is increasing as determined by monitoring over an established period of time.

Signs of accelerated erosion are minimal or diminishing for the ecological site as determined by monitoring over an established period of time. As indicated by such factors as:

- ground cover,
- litter,
- live vegetation (e.g., grass, shrubs, trees) amount and type,
- rock ,
- signs of erosion,
- flow pattern,
- gullies, and
- rills and plant pedestaling.

Exceptions and exemptions (where applicable):

- None.

2.2.4.1.2. Standard Two: Riparian-Wetland Sites

LH-2. Riparian-wetland areas are in properly functioning condition.

Criteria for Meeting Standard Two

Stream channel morphology and functions are appropriate for proper functioning condition for existing climate, landform, and channel reach characteristics. Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate the stream energy of high-water flows.

Riparian-wetland functioning condition assessments are based on examination of hydrologic, vegetation, soil and erosion-deposition factors. BLM has developed a standard checklist to address these factors and make functional assessments. Riparian-wetland areas are functioning properly as shown by the results of applying the appropriate checklist.

The checklist for riparian areas is in Technical Reference 1737-9, Process for Assessing Proper Functioning Condition (BLM 1993d). The checklist for wetlands is in Technical Reference 1737-11, Process for Assessing Proper Functioning Condition for Lentic Riparian-Wetland Areas (BLM 1994c).

As indicated by such factors as the following:

- gradient,
- width/depth ratio,
- channel roughness and sinuosity of stream channel,
- bank stabilization,
- reduced erosion,
- captured sediment,
- ground water recharge, and
- dissipation of energy by vegetation.

Exceptions and exemptions (where applicable):

- Dirt tanks, wells, and other water facilities built or placed at a location to provide water for livestock or wildlife and not determined through local planning to provide for riparian or wetland habitat are exempt.
- Water impoundments permitted for construction, mining, or other similar activities are exempt.

2.2.4.1.3. Standard Three: Upland and Riparian-Wetland Plant Communities

LH-3. Productive, diverse upland and riparian-wetland plant communities of native species exist and are maintained.

Criteria for Meeting Standard Three

Upland and riparian-wetland plant communities meet DPC objectives. Plant community objectives are determined with consideration for all multiple uses. Objectives also address native species and the requirements of the Taylor Grazing Act (TGA); FLPMA; Endangered Species Act (ESA); Clean Water Act (CWA); and suitable laws, regulations, and policies.

DPC objectives will be developed to assure that soil conditions and ecosystem function described in Standards 1 and 2 are met. These objectives detail a site-specific plant community, which when obtained, will assure rangeland health; State water quality standards; and habitat for endangered, threatened, and sensitive species. Thus, DPC objectives will be used as an indicator of ecosystem function and rangeland health.

As indicated by such factors as the following:

- composition,
- structure, and
- distribution.

Exceptions and exemptions (where applicable):

- Ecological sites or stream reaches on which a change in existing vegetation is physically, biologically, or economically impractical are exempt.

2.2.5. Lands and Realty Management (LR)

2.2.5.1. Desired Future Conditions

LR-1. Continue to maintain utility and transportation connectivity along the important north-south utility and transportation corridor along Interstate 17 between Phoenix and northern Arizona, while protecting the resources described in the National Monument Proclamation.

2.2.5.2. Land Use Allocations

LR-2. Narrow the existing Black Canyon utility corridor (designated by the Phoenix RMP [BLM 1988]), so that the the corridor's eastern boundary follows the eastern boundary of the BLM-authorized right-of-way for Interstate Highway 17.

LR-3. New utility corridors, whether interstate, intrastate, or local, would not conform to the provisions of the National Monument Proclamation. Therefore, such corridors within the monument will not be considered.

LR-4. New transportation corridors, whether interstate, intrastate, or local, would not conform to the proclamation. Therefore, such corridors within the monument will not be considered.

LR-5. New BLM communication site areas designated in advance of demand would not conform to the proclamation. Therefore, new communication site areas within the monument will not be considered.

2.2.5.3. Management Actions

LR-6. In accordance with the FLPMA and the Monument Proclamation, no lands within the monument may be disposed of, exchanged or leased.

LR-7. Acquiring non-Federal lands within the monument boundaries will be considered if they become available from a willing seller. Upon acquisition, these lands would automatically become a part of the monument. Acquiring adjacent non-Federal lands (from a willing seller) will be considered if they could be managed to enhance monument values.

LR-8. High priority is assigned to acquiring lands that contain habitat recognized by the U.S. Fish and Wildlife Service (USFWS) as needed for the recovery of federally listed threatened or endangered species.

LR-9. Acquire land that contains resources determined to be important in contributing toward resource management goals and objectives, when management may be enhanced by public ownership. Resources so identified may include historical or heritage resources, outstanding scenic values, or critical ecosystems.

LR-10. Evaluate the long-term effects of land acquisitions near rural communities on community economic and social stability and environmental sustainability. Work with a diverse network of residents, user groups, and governments to determine if land tenure adjustments could enhance both local communities and environmental health.

LR-11. Maintain, obtain, and secure access rights to BLM-administered lands to meet monument management goals and objectives. This action is accomplished by requiring reciprocal grants (where needed) when granting rights-of-way across BLM-administered lands adjacent to the monument.

LR-12. Land use authorizations, including existing rights-of-way for utility lines, will be limited to and managed in accordance with the valid existing rights granted before the monument was designated. Maintenance of these existing facilities will be permitted, subject to compliance with current BLM policies and practices, provided that monument resources are protected.

LR-13. Access to existing utilities on existing vehicle routes is considered an administrative use and is allowed. Continued maintenance of authorized facilities is also allowed with suitable mitigation to minimize affects to monument resources. Design maintenance of vehicle routes for access to correct hazardous or unsafe conditions, but keep them to the smallest size and condition necessary to provide access.

2.2.6. Mineral Resources (MI)

2.2.6.1. Management Actions

MI-1. All Federal minerals in Agua Fria National Monument will remain withdrawn or closed from all forms of location, sale, or leasing, including withdrawn from location, entry, and

patent under the mining laws. Federal minerals are also withdrawn from disposition under all laws relating to mineral and geothermal leasing and from disposal under the Mineral Materials Act. Mineral interests may be exchanged if such exchange furthers the protective purposes of the monument.

Any mineral interests acquired by the United States within the monument are reserved as part of the monument and are subject to the aforementioned withdrawals.

MI-2. For lands encumbered by mining claims, no activity beyond casual use, as defined in the 43 CFR 3809 regulations, is allowed without a determination of valid existing rights.

MI-3. Where there are valid existing rights, a mining plan of operations is required for any activities beyond casual use.

2.2.7. Paleontological Resources (GL)

2.2.7.1. Desired Future Conditions

GL-1. Paleontological resources are managed for their scientific, educational, and recreational values, and adverse impacts to these resources are mitigated.

GL-2. The BLM preserves and protects significant vertebrate paleontological resources for present and future generations. Scientifically significant invertebrates (to be determined by a qualified paleontologist) are also protected.

2.2.7.2. Land Use Allocations

GL-3 Areas will be classified according to their potential to contain vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils. Paleontological Sensitivity Classes are as follows.

Class 1 (low sensitivity): Igneous and metamorphic geologic units and sedimentary geologic units where vertebrate fossils or uncommon invertebrate fossils are unlikely to occur.

Class 2 (moderate sensitivity): Sedimentary geologic units that are known to contain or have unknown potential to contain fossils that vary in significance, abundance, and predictable occurrence.

Class 3 (moderate sensitivity): Areas where geologic units are known to contain fossils but have little or no risk of human-caused adverse impacts or low risk of natural degradation.

Class 4 (high sensitivity): Areas where geologic units regularly and predictably contain vertebrate fossils or uncommon invertebrate fossils and are at risk of natural degradation or human-caused adverse impacts.

2.2.7.3. Management Actions

GL-4. BLM will identify and protect significant fossils and allow for scientific research at paleontological sites, in accordance with permitting procedures.

GL-5. Should paleontological resources be discovered, the discovery will be evaluated to determine the geologic unit and the risk of adverse impacts to sensitive resources from human or natural processes. The discovery site will then be classified and managed consistent with the land use allocation classifications described above.

2.2.8. Rangeland Management (GM)

2.2.8.1. Desired Future Conditions

GM-1. Rangeland conditions will conform to the Land Health Standards described in Arizona Standards for Rangeland Health and Guidelines for Grazing Administration, which describe the desired conditions needed to encourage proper functioning of ecological processes. These standards are described in greater detail in the above section on Land Health Standards.

GM-2. Watersheds are in properly functioning condition, including their upland, riparian, and aquatic components. Soil and plant conditions support infiltration, storage, and release of water that are in balance with climate and landform.

GM-3. Ecological processes are maintained to support healthy biotic populations and communities.

2.2.8.2. Land Use Allocations

GM-4. BLM will continue to administer the current 11 grazing authorizations on 10 allotments as shown on Map 6 .

2.2.8.3. Management Actions

GM-5. Limit livestock grazing in riparian areas to the winter season (November 1 to March 1).

GM-6. Remove the immediate area surrounding Badger Springs Wash from the Cordes allotment to provide for developing a visitor parking area, information kiosk, campground, and infrastructure.

GM-7. Fence construction and maintenance will follow guidance provided in BLM's Handbook on Fencing No. 1741-1.

GM-8. When lands are devoted to a public purpose that precludes livestock grazing, the BLM will adjust allotment boundaries to allow for that use.

GM-9. Inventory and/or monitoring studies will be used to determine if adjustments to permitted use levels, terms and conditions and management practices are necessary in order to meet and/or make significant progress towards meeting the Arizona Standards for Rangeland Health and other management objectives.

GM-10. Allotment evaluations to determine if grazing practices are achieving the desired standards are conducted before the grazing permit or lease is renewed. Changes in grazing practices needed to achieve the standards are then incorporated in the stipulations of the reissued permit or lease.

GM-11. Rest-rotation, deferred-rotation, seasonal or short-duration use, or other management systems may be implemented where needs are identified through monitoring. Monitoring will be used to assess the effectiveness of changes brought about by the new management practices.

GM-12. Range improvements needed for proper management of the grazing program will be determined and completed, including repair and/or installation of fences, cattle guards, and water developments.

GM-13. Vehicular access to repair range improvements by the grazing permittee or lessee is considered administrative access. Use of vehicle routes closed to public use, but limited to administrative uses, will be allowed to maintain or repair range improvements.

GM-14. One-time travel off designated routes to access or retrieve sick or injured livestock would be authorized as an administrative use for transporting the animal to obtain medical help.

GM-15. Management practices to achieve DPCs will consider protecting and conserving known cultural resources, including historical sites, prehistoric sites, and plants of significance to Native American people.

GM-16. Apply management actions outlined in the Arizona Standards for Rangeland Health and Guidelines for Grazing Administration (Land Health Standards) to recognize and correct potential erosion problems that could degrade other resources, with prioritized emphasis on sites that might directly affect species that have been listed as threatened, endangered, or candidate by the USFWS.

2.2.8.4. Arizona Standards for Rangeland Health - Guidelines for Grazing Administration

The Arizona Standards for Rangeland Health and Guidelines for Grazing Administration are a series of management practices used to ensure that grazing meets the standards for rangeland health, which are referred to in this plan as Land Health Standards. The following guidelines apply to all areas where grazing occurs. Refer to the Land Health Standards section (see page 27) for descriptions of the standards.

Guidelines for Standard One

GM-17. Management activities will maintain or promote ground cover that will provide for infiltration, permeability, soil moisture storage, and soil stability appropriate for the ecological sites. The ground cover should maintain soil organisms, plants, and animals to support the hydrologic and nutrient cycles and energy flow. Ground cover and signs of erosion are surrogate measures for hydrologic and nutrient cycles, and energy flow.

GM-18. When grazing practices alone are not likely to restore areas of low infiltration or permeability, land management treatments may be designed and implemented to attain improvement.

Guidelines for Standard Two

GM-19. Management practices maintain or promote sufficient vegetation to maintain, improve or restore riparian-wetland functions of energy dissipation, sediment capture, groundwater recharge, and stream bank stability, thus promoting stream channel morphology (e.g. gradient, width/depth ratio, channel roughness, and sinuosity), and functions suitable to climate and landform.

GM-20. New facilities are located away from riparian-wetland areas if they conflict with achieving or maintaining riparian-wetland function. Existing facilities are used in a way that does not conflict with riparian-wetland functions or are relocated or modified when incompatible with these functions.

GM-21. The development of springs, seeps, or other projects affecting water, and associated resources will be designed to protect ecological functions and processes.

Guidelines for Standard Three

GM-22. The use and perpetuation of native species will be emphasized. When restoring or rehabilitating disturbed or degraded rangelands, nonintrusive, non-native plant species are suitable for use where native species (a) are not available, (b) are not economically feasible, (c) cannot achieve ecological objectives as well as non-native species, and/or (d) cannot compete with already established non-native species.

GM-23. Intensity, season and frequency of use, and distribution of grazing use will be managed to provide for growth and reproduction of plant species needed to reach DPC (Desired Plant Community) objectives.

GM-24. Grazing on designated ephemeral (annual and perennial) rangeland may be authorized if the following conditions are met:

- Ephemeral vegetation is present in draws, washes, and under shrubs, and has grown to useable levels at the time grazing begins; as well as sufficient surface and subsurface soil moisture exists for continued plant growth.
- Serviceable waters can provide for proper grazing distribution.
- Sufficient annual vegetation will remain on site to satisfy other resource concerns (e.g. watershed, wildlife, wild horses, and burros).
- Monitoring is conducted during grazing to determine if objectives are being met.

GM-25. Grazing management practices will target populations of noxious weeds that can be controlled or eliminated by approved methods.

GM-26. DPC objectives will be quantified for each allotment through the rangeland monitoring and evaluation process. Ecological site descriptions available through the Natural Resources Conservation Service (NRCS) and other data will be used as a guide for addressing site capabilities and potentials for change over time. These DPC objectives are vegetation values that BLM is managing over the long term. Once established, DPC objectives will be updated and monitored by the use of indicators for Land Health Standard Three.

2.2.9. Recreation Management (RR)

2.2.9.1. Desired Future Conditions

RR-1. Visitors have opportunities to view scenic vistas, wildlife and archaeological sites through a variety of appropriate and sustainable activities.

RR-2. Facilities, such as parking areas and trails, are designed and developed to ensure enjoyment and public safety, while protecting monument values.

RR-3. The public understands and appreciates the purpose and significance of Agua Fria National Monument and the benefits of protecting its resources and values for present and future generations.

RR-4. Desired Future Conditions conform to the benefits-based opportunities and outcomes identified for the monument as a whole and for each recreation management zone. These zone-specific recreation settings, with associated activities and desired outcomes (experiences and benefits), are described in detail in the Proposed RMP/FEIS in Appendix S, Benefits-Based Recreation. Also included are prescriptions for facilitating the attainment of beneficial outcomes and an activity planning framework that addresses management, marketing, and monitoring actions needed to achieve management objectives and setting prescriptions.

2.2.9.2. Front Country Recreation Management Zone (RMZ)

RR-5. The Front Country RMZ will be the focal point for both motorized and non-motorized visitation, concentrating public access, recreation activities, development along major travel routes, and more intensively visited use areas. The Front Country RMZ will contain more developed opportunities, such as interpretive opportunities at popular sites, and supporting recreation facilities where intensive management is needed. Management will place an emphasis on maintaining public access to the Front Country RMZ for public use, while maintaining the integrity of monument resources and values. Some areas may be designated as day use to promote visitor safety, and for resource protection.

RR-6. Desired recreation opportunity experiences, and settings within the Front Country RMZ will range between rural, roaded-natural, and semi-primitive motorized. Both day use and overnight recreation uses will be acceptable unless otherwise specified in the land-use plan allocations. Day-use areas with more intensive use will be evaluated and sited within the Front Country.

RR-7. Recreational opportunities will allow visitors to responsibly interact with the resources, offer people with physical limitations a way to enjoy the monument while still maintaining the integrity of the resources and landscape characteristics, and give the public sustainable recreation/tourism opportunities while protecting the integrity of the monument's cultural sites and other resources.

2.2.9.3. Back Country Recreation Management Zone

RR-8. The Back Country RMZ will provide an undeveloped, primitive, and self-directed visitor experience and landscape setting without provisions for motorized or mechanical access. The

management emphasis will be to preserve natural, undeveloped landscapes. Back Country will be managed to maintain a natural landscape character. The Back Country RMZ will provide opportunities for adventure, challenge, solitude, and discovery. Facilities will be minimal: provided only where vital for resource protection or public safety, or for approved administrative purposes. Facilities will generally be limited to trails, signs and other amenities, which are essential to the protection of monument resources. Maintaining the integrity of the monument values and resources is integral to any activity.

RR-9. The desired recreation settings and associated experiences within this zone are mainly semi-primitive and non-motorized. The Back Country RMZ will offer non-motorized access and recreation opportunities within primitive settings, where self-reliant and properly equipped visitors can experience solitude. Encounters with other users will be lower than in the Front Country RMZ. Recreation experiences will be primitive, with hunting, hiking, backpacking, wildlife observation, cultural study, photography, and camping as the main activities. Trail and cross-country foot or horseback travel may be permitted.

2.2.9.4. Passage Recreation Management Zone

RR-10. The Passage RMZ includes secondary travel routes and associated areas where visitor use will not be directed or encouraged but will be accommodated. Rudimentary facilities, such as the following could be provided or available where needed for resource protection or public safety:

- toilets,
- designated or dispersed primitive campsites,
- scenic turnouts,
- kiosks,
- interpretive sites,
- signs,
- parking and staging areas, and
- trailheads.

This zone will center on the designated motorized travel and transportation network within the Back Country RMZ . The Passage RMZ will be 200 feet-wide, 100 feet on each side of the centerline of designated vehicle routes.

RR-11. Desired recreation opportunities, experiences, and settings within the Passage RMZ will range from roaded-natural to semi-primitive motorized. Both day use and overnight recreation use will be acceptable, unless otherwise specified in the land use plan allocations. Archaeological sites allocated to Moderate public use could be interpreted within this zone.

2.2.9.5. Land Use Allocations

Land use allocations for recreation management are shown on Map 7 .

RR-12. AFNM Special Recreation Management Area (70,900 acres)

The entire monument is allocated as a Special Recreation Management Area encompassing three Recreation Management Zones.

RR-13. Front Country Recreation Management Zone (RMZ) (11,900 acres)

This RMZ entails a greater focus on managing recreational and interpretive opportunities, as described above in the Desired Future Conditions.

RR-14. Back Country Recreation Management Zone (RMZ) (57,650 acres)

This RMZ emphasizes management of recreation and public access to maintain the natural landscape character with minimal development.

RR-15. Passage Recreation Management Zone (RMZ) (1,350 acres)

This RMZ consists of a 200-foot wide corridor (100 feet on each side of centerline) along all designated vehicle routes passing through the Back Country RMZ.

2.2.9.5.1. Management Actions

Visual resource management and travel management are closely related to recreation management. Allocations and actions to achieve the Desired Future Conditions of each RMZ are described in the section on Visual Resource Management. Management actions related to motorized and non-motorized recreation routes are described in the Travel Management section.

2.2.9.5.2. General Recreation Management

RR-16. Recreation will focus on activities or experiences that depend on the monument's resources and cannot readily be obtained elsewhere. Recreation uses that do not depend on the lands within the monument will be encouraged to move to other BLM-managed lands.

RR-17. Visitors wishing to camp and park along designated roads and primitive routes will be strongly encouraged through visitor information, education, and signing to select and use sites with clear evidence of prior use. Such evidence is indicated by easy vehicle access to the site, lack of vegetation, bare and compacted soils and other evidence of prior use like fire rings. If such areas are to be closed to camping and rehabilitated, signs will be posted to that effect.

RR-18. Recreational target shooting is prohibited throughout the monument. Hunting may continue in accordance with the applicable laws and regulations of the State of Arizona.

RR-19. Paintball activities are prohibited within the monument.

RR-20. Geocaching activities are prohibited in areas managed for primitive or semi-primitive non-motorized settings. Caches will not be allowed within archaeological sites.

RR-21. Equestrian use will be monitored and managed to meet Arizona Land Health Standards.

RR-22. Horses or other stock animals are prohibited at signed archaeological sites.

RR-23. The use of weed-free feed will be encouraged to prevent introducing noxious, invasive weeds.

RR-24. Collecting natural organic and inorganic materials (except for fish and wildlife taken in accordance with state law and trash and litter) is prohibited except for scientific research and other pre-approved purposes. Permitted collections require written approval from the BLM field office manager or the monument manager.

RR-25. Apiary permits are prohibited within 1/4 mile of identified high-use areas, such as facilities, trailheads, and areas subject to SRP events, or at active scientific and research areas.

RR-26. Commercial filming or still photography requiring a permit in accordance with Public Law 106-206 will be issued under the SRP guidelines when associated with permitted recreation activities. BLM will evaluate applications on a case-by-case basis to determine whether they are consistent with monument values. The fee schedule will be used as outlined in 43 CFR 2920 commercial filming regulations. Non-recreation related commercial filming will be managed by the appropriate 2920 guidelines.

RR-27. The current authority for collection of recreation user fees does not allow for collection of such fees on the Agua Fria National Monument. Under the Federal Lands Recreation Enhancement Act of 2004, P.L.108-447, fees may be charged at a site that has:

- clearly defined access points and area boundaries,
- substantial expenditure in operations and maintenance costs,
- significant investment in facilities (including roads and trails), and
- contains all of the following amenities:
 - a designated and developed parking area,
 - permanent toilet,
 - permanent trash receptacle,
 - kiosks,
 - picnic tables, and
 - security services commensurate with use levels.

Should the above criteria be met in the future, a study would be initiated to determine the need and feasibility of charging a recreation use fee.

2.2.9.5.3. Camping

RR-28. There will be no developed campgrounds. Dispersed camping is allowed.

RR-29. Camping is limited to 14 days within the monument unless authorized by the manager.

RR-30. Require a free permit for camping. The monument manager can take action to limit camping permits in number if resource damage occurs that conflicts with achieving resource DFCs or threatens resources protected by the proclamation, or if health and safety issues emerge. If damage continues, more limitations may be required and implemented, including temporary or permanent area closures, limiting camping to designated sites, or seasonal limitations or closures.

RR-31. Make management adjustments that respond to recent ecological research and data results (for example, using data from outdoor recreation research on human effects to natural and biological resources).

RR-32. Camping is prohibited within ¼ mile from water sources “...containing water in such a place that wildlife or domestic stock will be denied access to the only reasonably available water” (Arizona Revised Statute 17-308, Unlawful Camping).

RR-33. The authorized officer may designate or close camping areas as needed to maintain, protect, or enhance resources.

RR-34. Limit firewood collection to campfire use only. Allow collection of dead, down, and detached material for campfire firewood. Monitor vegetation use and disturbance and temporarily or permanently suspend use to prevent resource damage.

2.2.9.5.4. Special Recreation and Event Permits

RR-35. Issuing of Special Recreation Permits (SRPs) is at the discretion of BLM. BLM's evaluation of permit applications will be based on applicable laws and regulations and will conform to the Monument Proclamation. The decision to authorize a proposed use will depend on the following:

- potential resource impacts,
- conflicts with other users,
- health and safety concerns,
- past or present performance with BLM or other agencies,
- BLM's ability to timely process the application and effectively administer the permit, and
- the number of permits issued during the 365 days (one year) prior to permit application.

RR-36. Commercial permits are issued to qualified applicants on a first-come, first-served basis based on monument values and how they meet resource and public health and safety concerns.

RR-37. Competitive and organized group and event activity permits are issued on a case-by-case basis based on monument values and how they meet resource and public health and safety concerns.

RR-38. Permit allocations for commercial and organized groups and events could be adjusted based on monitoring of areas to be used, to accurately accommodate level of use, to sustain monument objects and resources while maintaining desired social and managerial settings.

RR-39. Require groups of 25 or more to obtain an SRP.

RR-40. Rather than defining a maximum allowable number of SRPs, the BLM will review permit applications on a case-by-case basis taking into account the effects on resources and other users, safety concerns, and past performance. Permit numbers will be determined and may be increased or decreased through adaptive management.

RR-41. Prohibit competitive motorized or mechanized races, and consider other competitive events on a case-by-case basis as long as they do not conflict with achievement of all resource DFCs for the location.

RR-42. The BLM may issue SRPs for vending operations for a permitted SRP activity or event. Vending for permitted activities or events might be included with the SRP for the permitted activity or event if the permittee is responsible for the vending operations. If not, a separate SRP for vending will be required. Consider approval of a vending operation if the service or goods for sale directly enhance the recreation experience and cannot be adequately provided by the closest local community. BLM will not authorize permanent structures for vending.

RR-43. The BLM may issue recreation concession leases to enhance visitor use, visitor services, and visitor safety and enjoyment, if consistent with resource DFCs and monument objectives. Recreation concession leases, long-term authorizations for the use of public lands, are authorized under 43 CFR 2920. BLM will consider concessions on a case-by-case basis and base

determinations on consistency with monument management objectives and a clearly demonstrated need. The following management action relating to Biological Resources is applicable to SRPs:

- **Section 2.2.1.2.3, “Management Actions” [33]** Close pronghorn fawning areas to SRP activities between April 1 and June 1 annually.

2.2.9.5.5. Front Country RMZ

RR-51. Provide interpretive sites, trails, overlooks and other amenities or visitor services, where appropriate to protect monument resources, or enhance public safety and enjoyment. Selected cultural sites allocated to public-use levels High and Moderate may be interpreted for public visitation/education. Access to improvements may include development of non-motorized trails of dirt, pavement, or other hard surfaces in order to assist visitor travel and minimize disturbance to cultural and natural resources.

2.2.9.5.6. Badger Springs Area Management Actions

RR-52. Enhance the entrance to Badger Springs, which may include rerouting, reclaiming, and recontouring routes.

RR-53. Enhance the Badger Springs Wash Trail complex, which might include redesigning, rerouting, reclaiming, and recontouring the parking area, trailhead, and trails.

RR-54. At or near the trailhead, provide visitor amenities, which may include rest and shade areas, restrooms, equestrian parking and supports, and interpretive and directional signs.

RR-55. Provide for route maintenance to reduce erosion and maintain routes in the Badger Springs area to provide for public safety.

RR-56. Consider pronghorn movement and habitat needs in designing and implementing any development in the Badger Springs area. The following management action relating to Rangeland Management is applicable to Badger Springs:

- **Section 2.2.8.3, “Management Actions” [47].** Remove the immediate area surrounding Badger Springs Wash from the Cordes grazing allotment to provide for developing a visitor parking area, information kiosk, campground, and infrastructure.

2.2.9.5.7. Cordes Lakes Area Management Actions

RR-57 Fence the Cordes Lakes area (in T. 11 N., R. 3 E., Section 20) near the Agua Fria River to prevent motorized access and provide for safe vehicle parking.

RR-58. Provide access points for walk-in and universal access.

RR-59. Provide visitor amenities, which may include picnic tables, rest areas, shade facilities, directional signs, and interpretive and visitor information opportunities.

2.2.9.5.8. Bloody Basin Road Entrance (at the existing kiosk)

RR-60. Reclaim and landscape the west entrance on the southeast side for desert vegetation.

2.2.9.5.9. Back Country RMZ

RR-61. Maintain river crossings at Kelton Ranch, EZ Ranch, Horseshoe Ranch, and Cross Y Ranch.

RR-62. Allow dispersed tent camping with free permits.

RR-63. Prohibit motorized campers/units in the back country (except areas within the Passage RMZ).

2.2.9.5.10. Passage RMZ

RR-64. Allow campfires in existing disturbed areas.

2.2.10. Soil, Air, and Water Resources (WS)

2.2.10.1. Desired Future Conditions

WS-1. Management practices maintain, restore, or enhance water quality in conformance with State and Federal standards.

WS-2. Management practices maintain, restore, or enhance air quality in conformance with State and Federal standards.

WS-3. Instream water rights are quantified and protected to sustain wildlife, fish, and riparian resources.

WS-4. Implementing the Arizona Standards for Rangeland Health and Guidelines for Grazing Administration (Land Health Standards) meets the requirement for soils to support proper functioning of hydrologic, energy, and nutrient cycles.

2.2.10.2. Management Actions

WS-5. Identify, quantify, and secure legal entitlement to all existing water sources on the public lands and seek to acquire water rights, when possible, to ensure water availability to meet multiple-resource needs. Assert Federal reserved water rights, where suitable, in Agua Fria National Monument to secure water for the purposes of the reservations.

WS-6. Water quality in streams and springs will be monitored and protected to meet Federal and State standards and to ensure that the needs of fish and wildlife are met along with the needs of people.

WS-7. Prohibit surface water diversions and groundwater pumping that removes water from the monument or adversely affects the monument's values.

WS-8. Developed springs, seeps, and other projects affecting water and related resources will be designed to protect ecological functions and processes and to continue to provide habitat at the source for endemic invertebrates, native fishes, and other native aquatic species that may be present.

2.2.11. Special Designations (WR)

2.2.11.1. Desired Future Conditions

WR-1. Three segments of the Agua Fria River, determined by the BLM as suitable for designation to the national Wild and Scenic Rivers System, are maintained in free-flowing condition and managed to protect their outstandingly remarkable scenic, fish and wildlife, and cultural resource values.

WR-2. Tributary streams of the Agua Fria River, which are determined as eligible for study as potential additions to the national Wild and Scenic Rivers System, are maintained in free-flowing condition and managed to protect their outstandingly remarkable scenic, fish and wildlife, and cultural resource values.

2.2.11.2. Land Use Allocations

The BLM determined the suitability of designating the Agua Fria River to the National Wild and Scenic Rivers System in the Arizona Statewide Wild and Scenic Rivers Legislative Environmental Impact Statement (BLM 1994). In the Agua Fria National Monument Proposed Resource Management Plan and Environmental Impact Statement (BLM 2008), the BLM determined that eight tributaries of the Agua Fria River are eligible for consideration as to their suitability for designation to the National Wild and Scenic Rivers System. These river and stream segments are shown on Map 8 .

Congress makes the final decisions regarding river designations and their classification as wild, scenic, or recreational. In the interim, in accordance with BLM Wild and Scenic Rivers Manual 8351, the BLM is to manage these streams to preserve their free-flowing condition and protect their outstandingly remarkable values.

WR-3. The following segments of the Agua Fria River, including a total length of 22.4 river miles with 20.8 miles on public land, have been determined by the BLM as suitable for designation to the National Wild and Scenic Rivers System on the basis of outstandingly remarkable resource values.

- Sycamore Creek confluence to Bloody Basin Road, scenic classification, 7.7 miles.
- Bloody Basin Road to south end of Agua Fria River Canyon, wild classification, 10.3 miles.
- Well and pump house to Larry Canyon confluence, scenic classification, 4.4 miles.

WR-4. The following stream segments on public land, a total of 36.3 miles, have been determined by the BLM to be eligible for consideration as to their suitability as additions to the National Wild and Scenic Rivers System, with preliminary classifications, based on their outstandingly remarkable values.

- Ash Creek/Little Ash Creek: wildlife values; scenic classification; 1.1 miles along Ash Creek and 2.7 miles along Little Ash Creek.
- Sycamore Creek: wildlife values; scenic classification; 3.3 miles.
- Indian Creek: fish and wildlife values; scenic classification; 5.6 miles.
- Silver Creek: scenic, fish and wildlife, and cultural resource values; scenic classification; 4.9 miles.
- Bishop Creek: wildlife, scenic, and cultural resource values; wild classification (south of Bloody Basin Road), 5.2 miles; scenic classification (north of Bloody Basin Road), 1.7 miles.
- Tank Creek: scenic, wildlife, and cultural resource values; wild classification; 3.4 miles.

- Lousy Creek: scenic, fish and wildlife, and cultural resource values; wild classification; 5.0 miles.
- Larry Creek with tributaries: scenic and fish and wildlife values; wild classification; 3.4 miles.

2.2.11.3. Management Actions

WR-5. Maintain the free-flowing characteristics of the Agua Fria River and the eligible streams by prohibiting new stream impoundments, diversions, channelizing, or rip-rapping to the extent the BLM is authorized under law.

WR-6. Protect the outstandingly remarkable values identified for the Agua Fria River and each eligible stream segment, subject to valid existing rights, until the segment is determined not suitable for designation or Congress makes a decision regarding designation.

WR-7. Protective management actions shall apply to the areas within $\frac{1}{4}$ mile on either side of the Agua Fria River and each eligible stream segment.

WR-8. Authorized uses shall not be allowed to adversely affect suitability, eligibility, or the tentative classification (i.e., uses or developments that would cause a change in classification from wild to scenic, or scenic to recreational).

WR-9. If one or more stream segments are eventually found non-suitable for designation, those streams will be managed according to the Monument Proclamation and the allocated recreation settings and other resource allocations. Protective management actions for fish and wildlife, scenic, and cultural resource values are included in the sections on Biological Resources, Visual Resource Management, Cultural Resources, and Travel Management.

WR-10. Implement route closures, identified in the section on Travel Management, to help protect outstandingly remarkable values along Ash, Sycamore, Silver, Bishop, and Lousy Creeks. Prohibit new vehicle routes in areas managed as wild segments.

AC-1. Remove the designations of Larry Canyon and Perry Mesa Areas of Areas of Critical Environmental Concern (ACECs), because the Monument Proclamation provides for a higher level of protection and management across a more extensive landscape, rendering these designations unnecessary.

2.2.12. Travel Management (TM)

2.2.12.1. Desired Future Conditions

TM-1. Designate, implement, and monitor a comprehensive travel management network affording a range of high-quality and diverse motorized and non-motorized recreation opportunities. The network consists of a system of roads, primitive roads, and trails. The designated travel management network and associated recreation opportunities are consistent with all monument resource management objectives, recreation settings, and preservation of monument objects.

2.2.12.2. Land Use Allocations

TM-2. Motorized and mechanized uses on all monument lands are limited to designated routes only. Limited to Designated Routes = 70,900 acres.

TM-3. There are no airstrips designated for public use on public lands within the monument. Any existing airstrips on acquired lands would be evaluated as to their compatibility with monument management objectives.

2.2.12.3. Management Actions

TM-4. All motorized and mechanized vehicles are limited to designated routes, except in emergency situations or for BLM-approved administrative purposes. Motorized use shall keep within the designated route with reasonable use of the shoulder and immediate roadside, allowing for vehicle passage, emergency stopping, or parking unless otherwise posted.

TM-5. Temporary access and use restrictions may be enacted when needed to protect resources or public health and safety.

TM-6. Vehicle access on designated routes may be temporarily closed when weather creates muddy conditions. When conditions are such that travel by vehicle cannot be accomplished without damaging the existing roadway, departing the roadway and traveling across cross-country, the route is closed until the roadway can once again support a vehicle without damage.

TM-7. Administrative and other authorized use will be approved on a case-by-case basis.

TM-8. Cross-country motorized vehicle or mechanized equipment travel is prohibited except in response to emergencies, or for BLM- or interagency-authorized tasks.

TM-9. Mechanized and motorized vehicles are not permitted to be used off designated routes to retrieve game, with the exception that non-motorized, wheeled game-carriers are permitted for travel cross-country.

TM-10. All effects of route use, whether motorized or non-motorized, will be mitigated where such use is determined to be inconsistent with established monument management objectives or is harming monument resources. Possible mitigation measures include the following:

- closing routes,
- limiting to seasonal use,
- limiting vehicle types, speeds, or noise,
- rerouting offending route segments, or
- modifying routes to reduce or eliminate conflicts.

TM-11. Vehicle routes will receive the least amount of maintenance needed to provide desired access. Many routes will be retained in a primitive condition to discourage excessive speeds, so as to protect monument values and promote public safety.

TM-12. All vehicle route construction must be consistent with other resource objectives, desired social and managerial settings, and VRM objectives.

TM-13. Interconnecting routes may be developed where feasible and consistent with resource management goals and monument values. Vehicle routes may be developed if needed for protection of monument resources, visitor education and appreciation, or visitor safety.

TM-14. Managing dust will be part of the monument's ongoing monitoring effort. Proposed mitigation actions (closure, seasonal restrictions, speed limits, change in use, surfacing, surface and dust abatement treatments) will be addressed as part of the adaptive management for travel

management. Routes with unacceptable or noncompliant use and associated air quality impacts will be closed to travel until route conditions change or are corrected.

TM-15. Currently, the monument is outside the PM₁₀ Serious Non-attainment Area around Phoenix. In the future, if included in this area, routes will be managed to comply with PM₁₀ rules.

TM-16. Non-mechanized travel (i.e., foot and equestrian use) is allowed off designated routes, except where otherwise prohibited. The creation of routes caused by repetitive use is discouraged. Routes not meeting land health standards or plan objectives may be closed.

TM-17. All caves, mines, wells, abandoned structures, or other confined spaces are closed to public entry unless an individual site is signed open for such entry or entry is authorized under special use permit.

TM-18. The use of aircraft, motorized and non-motorized, must conform to Federal Aviation Administration (FAA) standards. No backcountry airstrips are designated for public use in the monument. The use of public lands for launching or landing aircraft other than airplanes (balloons, hang gliders, etc.) may be permitted on a case-by-case basis through the appropriate permit process.

TM-19. Require emergency vehicles, including air support, to use designated routes whenever possible and practical. When not possible or practical, emergency vehicles should, as much as possible, minimize disturbance of vegetation and the risk to monument resources by using existing openings and disturbed areas.

TM-20. Set speed limits for OHV use to provide for visitor safety and to minimize visitor conflicts.

TM-21. Maintain safe public access, which may include the following: designing and installing needed improvements at low-water crossings, installing vehicle control guards, and enforcing traffic laws and other applicable regulations for visitor safety.

2.2.12.4. Route Management for Motorized Use: Bloody Basin Road

TM-22. On the Bloody Basin Road, provide a travel route accessible by high-clearance vehicles, where views of the monument and interpretation of monument resources offer a better understanding of the resources being protected. Along this central monument travel route, create a comprehensive visitor experience that is both sensitive to monument resources and provides a high-quality visitor experience.

TM-23. Maintain at BLM Maintenance Intensity standard of Level 3 'Medium' (BLM Roads and Trails Terminology Report), passable by high-clearance vehicles and consistent with Yavapai County and Tonto National Forest maintenance levels. Consider limiting the entire length to licensed vehicles only.

TM-24. Maintain the existing roaded-natural, and rural settings ½ mile to either side of the road's centerline.

TM-25. Secure easements and rights-of-way where needed to ensure long-term public access.

TM-26. Interpret monument features along the route, including the following:

- prehistoric cultural features, and

- historic homesteads, settlements, and ranching history, and other natural and cultural features.

TM-27. Install directional, safety, and interpretive signs to enhance public use, enjoyment, and stewardship of Bloody Basin Road.

TM-28. Mitigate impacts to movement of pronghorn and other wildlife.

2.2.12.5. Route Management for Motorized Use: All Recreation Management Zones (RMZs)

TM-29. Where deemed necessary to achieve Desired Future Conditions for resource management, roads or trails for motorized use may be closed and reclaimed to a natural state.

TM-30. Routes open for administrative use will be maintained as needed to provide for the use.

2.2.12.6. Route Management for Motorized Use: Front Country and Passage RMZs

TM-31. Relocate segments of routes when needed to reduce resource damage and help protect the monument's resources.

TM-32. Allow relocation of routes for access to public lands around privately owned parcels (inholdings), if needed to meet administrative or public needs.

TM-33. No new motorized routes will be built except for the following reasons:

- to protect monument values,
- to mitigate resource conflicts or damage,
- to correct hazardous travel conditions, and/or
- to meet other resource management objectives.

TM-34. Design route construction to blend into the environment and to be compatible with Desired Future Conditions for the area.

2.2.12.7. Route Management for Motorized Use: Back Country RMZ

TM-35. Allow emergency route construction to maintain access for permitted operations and administrative purposes. No other construction will be allowed unless necessary to meet DFCs.

TM-36. Permit emergency response vehicles, including aircraft landing, in the Back Country RMZ . If practical, these vehicles should use existing routes or areas void of vegetation and cultural resources.

TM-37. Non-emergency administrative use of vehicles may be allowed in the Back Country on missions pre-approved by the BLM monument manager or field manager. If practical, these vehicles should use existing routes or areas void of vegetation and cultural resources.

2.2.12.8. Route Maintenance for Motorized Use (except Bloody Basin Road)

TM-38. Designated routes will be maintained at their current conditions, except where resource degradation or user conflicts occur. No routes will be upgraded. Maintenance priorities will be identified for the following reasons:

- to ensure access by authorized users such as BLM's permittees and lessees,
- to allow access for wildlife enhancement and maintenance projects,
- to ensure public safety by correcting hazardous conditions,
- to protect monument values, and
- to mitigate resource damage.

TM-39. Route maintenance may be implemented to purposely limit vehicular type or speed. For example, a route may be purposely maintained in a primitive condition to discourage ATVs or four-wheel drive vehicles from traveling at speeds exceeding 25 to 30 miles per hour.

2.2.12.9. Trail Management for Non-Motorized and Non-Mechanized Recreation Use: All RMZs

TM-40. Where deemed necessary to achieve DFCs for resource management, non-motorized and non-mechanized trails may be closed and reclaimed to a natural state.

TM-41. Do not allow trails or trail construction to degrade monument resources.

TM-42. Design trails to blend into the environment and manage them to meet visual resource management objectives for each RMZ.

TM-43. Keep trails compatible with social and managerial settings for recreation management.

TM-44. Closed motorized routes may be considered for redevelopment as hiking, equestrian and/or mechanized vehicle trails.

2.2.12.10. Trail Management for Non-Motorized and Non-Mechanized Recreation Use: Front Country and Passage RMZs

TM-45. Develop trails as needed to protect monument resources, improve public safety, and provide interpretive opportunities. Such trails may include the following: self-guided nature and interpretive trails; trails to interpretive sites not accessible by vehicle; or longer trails linking multiple sites for day or multiple-day trips.

TM-46. Build loop, connector, and linear trails, depending on recreation, access, interpretation, education, and resource objectives.

TM-47. Build trails to maintain connectivity to recreation opportunities within the monument, such as equestrian use, hiking, and viewing cultural sites.

TM-48. Build trails to link with other connector trails outside the monument. Explore opportunities to link networks of trails within the monument to those outside the monument on other public lands, or with the adjacent jurisdictions, where linkages would conform to monument values and would not impair protecting monument resources.

TM-49. Place priority for trail development on archaeological sites allocated to public use and developed for interpretive use and visitation.

2.2.12.11. Trail Management for Non-Motorized and Non-Mechanized Recreation Use: Back Country RMZ

TM-50. Build nonintrusive trails to allow visitors to access areas of interest and to enhance recreation experiences. Installation of trails may be considered where needed to protect monument resources, ensure public safety, or to further public education and interpretation objectives. Trail design could vary from built, engineered routes to trails marked only with fiberglass posts without any construction and minimal ground disturbance.

TM-51. Non-motorized trails may be evaluated for their potential to link areas of interest and provide a network of connecting trails. Such linked areas may include the following:

- Bull Tank and Baby Canyon,
- Badger Springs/Agua Fria Confluence and Pueblo Pato, or
- Black Canyon City and the southern part of Black Mesa.

2.2.12.12. Travel Management Implementation Decisions

This Approved RMP includes implementation decisions on designations for the 171 miles of inventoried routes in the monument (Appendix C, *Travel Management Plan*). The designated route network includes the following:

- 25 miles of secondary roads, accessible in good weather by two-wheel-drive vehicles;
- 69 miles of tertiary roads, accessible mainly by four-wheel drive, ATVs and motorcycles or, in some areas, high-clearance, two-wheel drive vehicles;
- 25 miles of tertiary roads are closed to public use, yet administrative use will be permitted as necessary; and
- 52 miles of roads are closed to all uses and will be restored or allowed to naturally reclaim.

Please see Map 9 for route designation decisions. These decisions are summarized below. No new routes are currently proposed.

Designated Travel Routes	94 miles
Designated as Closed Routes	52 miles
Designated for Administrative Use	25 miles

2.2.13. Visual Resource Management (VR)

2.2.13.1. Desired Future Conditions

VR-1. Throughout the national monument, the objective is to minimize the visual impacts of authorized activities.

VR-2. To the extent possible, night skies remain free of light pollution.

VR-3. Visual resources are managed to meet the objectives for Visual Resource Management (VRM) Classes II and III, as defined in BLM's Handbook H-8410-1, Visual Resource Inventory, (Section B, 1 through 4). Objectives (desired conditions) for these two VRM classes are described below.

VRM Class II: The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

VRM Class III: The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

2.2.13.2. Desired Future Conditions for Recreation Management Zones

VR-4. Visual resource objectives in the Front Country RMZ will emphasize retaining the current natural vistas while allowing visually sensitive visitor-related development.

VR-5. Visual resource objectives in the Back Country RMZ will emphasize retaining the current visual landscapes and vistas.

VR-6. Visual resource objectives in the Passage RMZ will emphasize retaining the current natural vistas while allowing visually sensitive visitor-related development.

2.2.13.3. Land Use Allocations

Allocations to VRM classes are shown on Map 10 .

VR-7. Lands managed to maintain wilderness characteristics are allocated to VRM Class II (20,900 acres).

VR-8. The remaining areas of the Back Country RMZ and Passage RMZ are allocated to VRM Class II (38,100 acres).

VR-9. The Front Country RMZ is allocated to VRM Class III (11,900 acres).

2.2.13.4. Management Actions

VR-10. Project proposals that could result in surface disturbance or may contain visible components will be analyzed using procedures outlined in BLM Handbook H-8431-1, Visual Contrast Rating, to determine their conformance with the VRM allocation of the project area. If necessary, modifications will be made to the project, including design changes or a change of location, for the project to meet the VRM Class objective. In any case, regardless of VRM

Class, an effort will be made to make any project proposal with a visible component as visually compatible with its surroundings as practical.

VR-11. To the extent possible, maintain night skies free of light pollution. Work with surrounding communities and other agencies to minimize the impact of lighting.

2.2.14. Wilderness Characteristics (WC)

2.2.14.1. Desired Future Conditions

WC-1. Lands allocated to maintain wilderness characteristics contain few human intrusions with primitive and natural landscape settings, providing self-reliant and self-directed visitor experiences. These characteristics have been determined to be reasonably present and of sufficient value (condition, uniqueness, relevance, importance) and need (trend, risk), and to be practical to manage and maintain.

WC-2. Lands and resources within these areas exhibit a high degree of naturalness. These areas are affected mainly by the forces of nature, and the imprint of human activity is substantially unnoticeable. Naturalness is evaluated by the following:

- occurrence of vehicle routes, fences, wildlife, and range facilities,
- nature and extent of landscape modifications,
- presence of native plant and wildlife communities, and
- habitat connectivity.

WC-3. Outstanding opportunities for solitude or primitive and unconfined recreation are present. Travel generally occurs through non-motorized and non-mechanical means. Motorized use that does not degrade natural and cultural resources or conflict with DFC is allowed on designated routes. Non-motorized conveyances (such as bicycles) are allowed on designated trails.

WC-4. There is no or minimal development of recreation facilities. Lands allocated to maintain wilderness characteristics provide opportunities for visitor adventure, challenge, solitude, and discovery. Recreation settings and associated experiences are semi-primitive non-motorized to primitive with limited areas of semi-primitive motorized around designated vehicle routes. Hunting, hiking, backpacking, camping, horseback riding, mountain bicycling, wildlife observation, photography, and historic/cultural study are the chief activities with foot or horseback the customary means of travel.

WC-5. Wildlife populations and habitat are recognized as important aspects of the naturalness and are actively managed.

2.2.14.2. Management Actions

WC-7. Lands allocated to maintain wilderness characteristics will be managed to protect primitive qualities. The management actions are designed to:

- maintain low interaction among users away from designated routes, and
- provide opportunities for experiencing isolation from the sights and sounds of other humans.

WC-8. Lands allocated to maintain wilderness characteristics will be managed to have limited evidence of human-induced management restrictions and controls. Visitors are encouraged to practice Leave No Trace skills to avoid human-induced impacts.

WC-9. In accordance with the Travel Management Plan for the monument, vehicle routes will be mitigated to resolve conflicts with cultural, biological, or other resources to achieve DFC objectives (which may allow for motorized access in these areas). Mitigation measures may include the following:

- engineering to reduce conflicts ,
- limiting seasons of use, vehicle type, vehicle speed, or vehicle numbers, and
- closing routes.

WC-10. BLM will consider building new routes only as a mitigation measure for route and resource conflicts or where necessary to meet approved administrative actions.

WC-11. The use of wheeled game carriers is allowed away from designated routes.

WC-12. Sites and areas affected by human activities will be reclaimed when such locales or sites are no longer needed by authorized land uses.

WC-13. Commercial recreation and vending operations, guided hunt and associated activities, and concession leases are allowed when such activities conform to the following:

- monument management objectives,
- desired recreation settings,
- VRM Class II objectives, and
- other social and managerial settings.

WC-14. Discretionary surface-disturbing activities that involve excavations or the use of motorized or mechanized equipment and are not compatible with achieving the DFC or specifically approved are prohibited.

WC-15. Arizona Game and Fish Department (AGFD) use of motorized and mechanized equipment off designated routes is considered an administrative use and will be allowed in suitable locations (as agreed to by BLM and AGFD) for such purposes including, but not limited to the following:

- water supplementation,
- collar retrieval,
- capture and release of wildlife, and
- maintenance, repair, and building or rebuilding of wildlife waters.

WC-16. Non-motorized access in areas managed for wilderness characteristics may include developing some trails, or simply marking foot routes with posts for minimal disturbance of the ground surface. Installing trails may be considered, where needed; to protect resources, to ensure public safety, or to advance public education and interpretation of objectives.

2.3. Public Involvement

The BLM will continue to work with existing partners, cultivate new partnerships, and actively seek the views of the public, using techniques such as news releases, website postings, and mass mailings to ask for participation and to inform the public of new and ongoing management

actions and site-specific planning, with opportunities and timeframes for comment. The public is encouraged to contact the BLM (Hassayampa Field Office at 21605 N. 7th Avenue, Phoenix, Arizona 85027) and request that their name be placed in the field office mailing list along with their specific area of interest (e.g., wildlife, cultural resources, etc.) for plan implementation. The public may also make this request by calling (623) 580 5500.

The BLM will also continue to coordinate, both formally and informally, with the numerous federal and state agencies, American Indian Tribes, local agencies, and officials interested and involved in the management of public lands in the national monument.

2.4. Management Plan Implementation

Plan implementation is a continuous and active process. Decisions presented in the Management Decisions section of this Approved RMP are of three types: Immediate, One-Time, and Long-Term. The Approved RMP also includes implementation decisions for route designations and related decisions as detailed within a Travel Management Plan (TMP) for the AFNM (Appendix C, *Travel Management Plan*).

2.4.1. Immediate Decisions

These decisions go into effect upon signature of the Record of Decision and Approved RMP. Immediate decisions require no additional analysis and provide the framework for any subsequent activities proposed in the planning area. Proposals for actions such as trail construction and other allocation-based actions will be reviewed against these decisions/allocations to determine if the proposal is in conformance with the plan.

2.4.2. One-Time Decisions

These decisions include those that are implemented after additional site-specific analysis is completed. Examples are implementation of habitat restoration projects or interpretive developments. One-time decisions usually require additional analysis and are prioritized as part of the BLM budget process. Priorities for implementation of “one-time” RMP decisions will be based on several criteria, including:

- Current and projected priorities for resource protection and other management goals.
- National and statewide BLM management direction and program emphasis.
- Funding.

2.4.3. Long-Term Guidance/Life of Plan Direction

These decisions include the goals, objectives (Desired Future Conditions), and management actions established by the plan that are applied during site-specific analyses and activity planning. This guidance is applied whether the action is initiated by the BLM or by a non-BLM project proponent. Long-term guidance and plan direction is incorporated into BLM management as implementation-level planning and project analysis occurs. For instance, if there is a proposal for construction of a new non-motorized trail through public land, that proposal would need to be in harmony with the goals, allocations, and actions established through this Approved RMP relative to that parcel of land, for the associated monument values, prescribed recreation settings, and visual resource management classes. If the proposal was in compliance with the BLM’s long-term

guidance, it could easily move onto the next level of assessment. In short, these decisions “guide” BLM decision-makers in what is, and is not acceptable through the life of the plan.

2.4.4. General Implementation Schedule of “One-Time” Actions

Decisions in the Approved RMP will be implemented over a period of years depending on budget and staff availability. Most of these actions require additional analysis and site-specific activity planning. Annual priority lists and schedules will assist BLM managers and staff members in preparing budget requests and in scheduling work. However, the proposed priorities must be considered tentative and will be affected by future funding, changing program priorities, non-discretionary workloads, community dynamics, and cooperation by partners and external publics.

2.4.5. Implementation Updates

The BLM will prepare an *Annual Planning Update Report and Summary* on the implementation of the Approved RMP. This report will be released in January of the year following the fiscal year reviewed (for example, January 2011 for Fiscal Year 2010) and will be available to the public on the Internet, with hard copies available upon request. Annual review of the plan will provide consistent tracking of accomplishments and provide information that can be used to develop annual budget requests to continue implementation.

2.4.6. Maintaining the Plan

Land use plan decisions and supporting information can be maintained to reflect minor changes in data, but maintenance is limited to refining, documenting, and/or clarifying previously approved decisions. Some examples of maintenance actions include:

- Correcting minor data, typographical, mapping, or tabular data errors.
- Refining baseline information as a result of new inventory data (e.g., changing the boundary of an archaeological district, refining the known habitat of special status species, or adjusting the boundary of a fire management unit based on updated fire regime condition class inventory, fire occurrence, monitoring data, and/or demographic changes).

The BLM expects that new information gathered from field inventories and assessments, research, other agency studies, and other sources will update baseline data and/or support new management techniques, best management practices, and scientific principles. Adaptive management strategies may be used when monitoring data is available as long as the goals and objectives of the plan are met (see Section 2.5, “Plan Evaluation and Adaptive Management”). In other words, where monitoring shows land use plan actions or best management practices are not effective, modifications or adjustments may occur within the plan without amendment or revision of the plan as long as assumptions and impacts disclosed in the analysis remain valid and broad-scale goals and objectives are not changed.

Plan maintenance will be documented in supporting records and reported in annual planning updates. Plan maintenance does not require formal public involvement, inter-agency coordination, or the NEPA analysis required for making new land use plan decisions.

2.4.7. Changing the Plan

Land use plan decisions are changed through either a plan amendment or a plan revision. Amendments and revisions are accomplished with public input and the appropriate level of environmental analysis.

Plan amendments are often prompted by the need to:

- consider a proposed action that does not conform to the plan,
- implement a policy that changes land use plan decisions,
- respond to changed uses on public lands, and
- consider significant new information from resource assessments, monitoring, or scientific studies that change land use plan decisions.

Plan revisions involve preparation of a new RMP to replace an existing RMP. Revisions are necessary if monitoring and evaluation findings, new data, new or revised policy, or changes in circumstances indicate that decisions for an entire plan, or a major portion of the plan, no longer serve as a useful guide for resource management.

The Approved RMP may be changed, should conditions warrant, through a plan amendment. A plan amendment may become necessary if major changes are needed or in consideration of a proposal or action that is not in conformance with the plan. The results of monitoring, evaluation of new data, or policy changes and changing public needs might also provide the impetus for an amendment. Generally, an amendment is issue-specific. If several areas of the plan become outdated or otherwise obsolete, a plan amendment may become necessary. Amendments are accomplished with public input and the appropriate level of environmental analysis.

2.5. Plan Evaluation and Adaptive Management

2.5.1. Plan Evaluation

Evaluation is a process in which the plan and monitoring data are reviewed to see if management goals and objectives are being met and if management direction is sound. Land use plan evaluations determine if decisions are being implemented, whether mitigation measures are satisfactory, whether there are significant changes in the related plans of other entities, whether there is new data of significance to the plan, and if decisions should be changed through amendment. Monitoring data gathered over time is examined and used to draw conclusions on whether management actions are meeting stated objectives, and if not, why they are failing.

Conclusions are then used to make recommendations on whether to continue current management or to identify what changes need to be made in management practices to meet objectives.

The BLM will use land use plan evaluations to determine if the decisions in the Approved RMP, supported by the accompanying NEPA analysis, are still valid in light of new information and monitoring data. Evaluation of the Approved RMP will generally be conducted every 5 years, unless unexpected actions, new information, or significant changes in other plans, legislation, or litigation triggers an evaluation.

The following estimated evaluation schedule will be followed for the Agua Fria National Monument Approved RMP:

- 2014
- 2019
- 2024
- 2029

Evaluations will follow the protocols established by the BLM Land Use Planning Handbook (H-1601-1) or other appropriate guidance in effect when the evaluation is initiated.

2.5.2. Adaptive Management

As defined by the Office of Environmental Policy and Compliance, adaptive management is a system of management practices based on clearly identified outcomes, monitoring to determine if management actions are meeting outcomes, and, if not, facilitating management changes that will best ensure that outcomes are met or re-evaluated.

As described in the DRMP/DEIS and the PRMP/FEIS, the AFNM Approved RMP fosters adaptive management by the presentation of desired future conditions that focus on reaching outcomes rather than identifying inflexible standards and prescriptions that may not be applicable in certain situations.

When land use plan actions or best management practices are found to be ineffective, modifications may occur without amendment of the plan as long as assumptions and impacts disclosed in the analysis remain valid and broad-scale goals and objectives are not changed. This approach uses on-the-ground monitoring, review of scientific information, and consideration of practical experience to adjust management and modify implementation of the plan to reach the desired outcome.

Abbreviations and Acronyms

A

ACEC :	Area of Critical Environmental Concern
ADA :	Americans with Disabilities Act
ADEQ :	Arizona Department of Environmental Quality
ADOT :	Arizona Department of Transportation
AFNM :	Agua Fria National Monument
AGFD :	Arizona Game and Fish Department
ALHS :	Arizona Land Health Standards
AML :	Appropriate Management Level
AMP :	Allotment Management Plan
AMS :	Analysis of the Management Situation
APHIS :	Animal and Plant Health Inspection Service
ARMP :	Approved Resource Management Plan
ARPA :	Archaeological Resources Protection Act
ASM :	Arizona State Museum
ATV :	All-Terrain Vehicle

B

BE :	Biological Evaluation
BLM :	U.S. Department of the Interior, Bureau of Land Management
BMP :	Best Management Practices
BO :	Biological Opinion
BOR :	Bureau of Reclamation

C

CAA :	Clean Air Act
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CAP :

Central Arizona Project

CEQ :

Council on Environmental Quality

CERCLA :

Comprehensive Environmental Response, Compensation and Liability Act

CFR :

Code of Federal Regulations

CO :

Carbon-monoxide

CSP :

Concentrating Solar Power

CSU :

Controlled Surface Use

CWA :

Clean Water Act

CX :

Categorical Exclusion

D**DEIS :**

Draft Environmental Impact Statement

DEQ :

Department of Environmental Quality

DFC :

Desired Future Condition

DHS :

Department of Homeland Security

DM :

Departmental Manual

DNA :

Determination of NEPA Adequacy

DNRC :

Department of Natural Resources Conservation

DO :

Dissolved Oxygen

DOI :

Department of the Interior

DPC :

Desired Plant Community

DR :

Decision Record (for an Environmental Assessment)

DRMP :

Draft Resource Management Plan

E**EA :**

Environmental Analysis or Environmental Assessment

EIS :

Environmental Impact Statement

EJ :
Environmental Justice
EO :
Executive Order
EPA :
Environmental Protection Agency
EPCRA :
Emergency Planning and Community Right to Know Act
EPS :
Economic Profile System
EPSC :
Economic Profile System for Communities
ERMA :
Extensive Recreation Management Area
ESA :
Endangered Species Act of 1973, as amended

F

FACA :
Federal Advisory Committee Act
FCC :
Federal Communications Commission
FEIS :
Final Environmental Impact Statement
FERC :
Federal Energy Regulatory Commission
FHWA :
Federal Highway Administration
FIMMS :
Facilities Inventory Maintenance Management System
FIL :
Fire Intensity Level
F.I.R.E. :
Finance, Insurance, and Real Estate
FLPMA :
Federal Land Policy and Management Act
FMP :
Fire Management Plan
FMZ :
Fire Management Zone
FO :
Field Office
FOIA :
Freedom of Information Act
FONSI :
Finding of No Significant Impact
FR :
Federal Register

FS :

Forest Service

FWS :

Fish and Wildlife Service

FY :

Fiscal Year

G**GIS :**

Geographic Information Systems

H**HA :**

Herd Area

HAZMAT :

Hazardous Materials

HMA :

Herd Management Area

HMM :

Hazardous Materials Management

HMP :

Habitat Management Plan

I**IB :**

Information Bulletin

IBLA :

Interior Board of Land Appeals

IDT :

Interdisciplinary Team

IM :

Instruction Memorandums [or Memoranda]

IMP :

Interim Management Policy (for WSAs)

L**LAA :**

Likely to Adversely Affect

LAC :

Limits of Acceptable Change

LN :

Lease Notice

LNT :

Leave No Trace

LUP :

Land Use Plan

M**MA :**

Management Action

MAG :

Maricopa Association of Governments

MFP :

Management Framework Plan

MIS :

Management Indicator Species

MIST :

Minimum Impact Suppression Tactics

MOA :

Memorandum of Agreement

MOU :

Memorandum of Understanding

MPO :

Mining Plan of Operation

MU :

Management Unit

N

NAAQS :

National Ambient Air Quality Standards

NAGPRA :

Native American Graves Protection and Repatriation Act

NCP :

National Contingency Plan

NEPA :

National Environmental Policy Act

NF :

Non Functional

NFP :

National Fire Plan

NHPA :

National Historic Preservation Act

NHT :

National Historic Trail

NIFC :

National Interagency Fire Center

NL :

No Lease

NLAA :

Not Likely to Adversely Affect

NLCS :

National Landscape Conservation System

NOA :

Notice of Availability

NOAA :

National Oceanic and Atmospheric Administration

NOI :

Notice of Intent

NO_x :

Nitrogen Oxides

NP :

National Park

NPDES :

National Pollutant Discharge Elimination System

NPS :

National Park Service

NRCS :

Natural Resources and Conservation Service (formerly Soil Conservation Service)

NREL :

National Renewable Energy Laboratory

NRHP :

National Register of Historic Places

NSO :

No Surface Occupancy

NWR :

National Wildlife Refuge

O**OHV :**

Off-Highway Vehicle

ORV :

Off-Road Vehicle

P**PCA :**

Primary Conservation Area

PFC :

Proper Functioning Condition

PILT :

Payment in Lieu of Taxes

PL :

Public Law

PM₁₀ :

Particulate Matter 10 microns in diameter or smaller

PPA :

Pollution Prevention Act

PRMP :

Proposed resource Management Plan

PRPA :

Paleontological Resources Protection Act

PSD :

Prevention of Significant Deteriorations

R**R & PP :**

Recreation and Public Purposes

RAC :

Resource Advisory Council

RCRA :

Resource Conservation and Recovery Act

REIS :

Reasonably Foreseeable Development

RFD :

Reasonably Foreseeable Development

RMIS :

Recreation Management Information System

RMP :

Resource Management Plan

RMZ :

Recreation Management Zone

ROD :

Record of Decision

ROS :

Recreation Opportunity Spectrum

S

SARA :

Superfund Amendments and Reauthorization Act

SCRMA :

Special Cultural Resource Management Area

SHPO :

State Historic Preservation Office

SIP :

Arizona State Implementation Plan

SMA :

Surface Management Agency

SRMA :

Special Recreation Management Area

SRP :

Special Recreation Permit

SSP :

Special Status Species

T

T&E :

Threatened and Endangered

TBC :

To Be Considered

TCP :

Traditional Cultural Properties

TGA :

Taylor Grazing Act

TMDL :

Total Maximum Daily Load

TMP :

Travel Management Plan

TSCA :

Toxic Substance Control Act

U**USC :**

United States Code

USDA :

United States Department of Agriculture

USDAFS :

United States Department of Agriculture Forest Service

USDI :

United States Department of the Interior

USDOT :

United States Department of Transportation

USFS :

United States Forest Service

USFWS :

United States Fish and Wildlife Service

USGS :

United States Geological Survey

V**VRM :**

Visual Resource Management

W**WA :**

Wilderness Area

WFIP :

Wildland Fire Implementation Plan

WHA :

Wildlife Habitat Area

WHBA :

Wild Free Roaming Horse and Burro Act

WMA :

Wildlife Management Area

WO :

BLM Washington Office

WSA :

Wilderness Study Area

WSR :

Wild and Scenic Rivers

WUI :

Wildland Urban Interface

Glossary

ACQUIRED PUBLIC LANDS :

Lands in Federal ownership that the Government obtained as a gift or by purchase, exchange, or condemnation. Also see PUBLIC LANDS .

ACTIVE MINING CLAIM :

A parcel of federal land, valuable for a mineral deposit or deposits. A claim is a parcel for which one has asserted a right of possession. The right is restricted to extracting and developing a mineral deposit. The rights granted by a mining claim are valid against a challenge by the United States and other claimants only after the discovery of a valuable mineral deposit. There are two types of mining claims: lode and placer. Since October 5, 1992, only claimants who have a legal interest in ten or fewer mining claims nationwide and who also meet other requirements, may perform assessment work and file evidence of assessment. All other claimants must pay an annual fee of \$125 per claim to BLM or file for a waiver from payment by August 31. Failure to file by August 31 requires BLM to declare the claim or site null and void by operation of law.

ACTIVITY PLAN :

A detailed and specific plan for managing a single resource program or plan element undertaken, as needed, to implement the more general resource management plan (RMP) decisions. BLM prepares activity plans for specific areas to reach specific resource management objectives within stated timeframes.

AIR QUALITY RATING :

See CLASS I AIR QUALITY RATING and CLASS II AIR QUALITY RATING .

AIRSHED:

An area that shares the same air because of topography, meteorology, and climate; the atmospheric zone potentially influenced by air pollutants from various sources.

ALLOTMENT:

An area of one or more pastures where one or more operators graze their livestock. An allotment generally consists of Federal rangelands, but may include intermingled parcels of private, State, or Federal lands. BLM stipulates the number of livestock and season of use for each allotment.

ALLOTMENT MANAGEMENT PLAN (AMP) :

A livestock grazing management plan for a specific unit of rangeland and based on multiple use resource management objectives. The AMP considers livestock grazing in relation to other uses of rangelands and to renewable resources--watershed, vegetation, and wildlife. An AMP establishes the seasons of use, number of livestock to be permitted on rangelands, and the range improvements needed.

ANALYSIS OF THE MANAGEMENT SITUATION (AMS) :

Step 4 in BLM's resource management planning process. An AMS describes a planning area's current public land management and suggests opportunities to better manage this land.

ANIMAL UNIT :

One mature (1,000 pound) cow or the equivalent based upon an average daily forage consumption of 26 pounds of dry matter per day.

ANIMAL UNIT MONTH (AUM) :

The amount of forage needed to sustain one cow, five sheep, or five goats for a month.

ANNUAL PLANT :

A plant that completes its life cycle and dies in 1 year or less. Also see PERENNIAL PLANT .

APPROPRIATE MANAGEMENT LEVEL (AML) :

In wild horse and burro management, a single number that is the high point of an established population range to maintain a thriving natural ecological balance, based on available forage, water, and other resource needs or conflicts.

AQUATIC HABITATS :

Habitats confined to streams, rivers, springs, lakes, ponds, reservoirs, and other water bodies.

AQUIFER:

A water-bearing bed or layer of permeable rock, sand, or gravel capable of yielding large amounts of water.

AQUIFER RECHARGE :

Adding water to an aquifer, a process that occurs naturally from the infiltration of rainfall and from water flowing over earth materials that allow it to infiltrate below the land surface.

ARCHAEOLOGICAL FEATURE :

A nonportable object, not recoverable from its matrix (usually in an archeological site) without destroying its integrity. Examples are rock paintings, hearths, post holes, floors, and walls.

AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC) :

A designated area on public lands where special management attention is required - (1) to protect and prevent irreparable damage to fish and wildlife; (2) to protect important historic, cultural, or scenic values, or other natural systems or processes; or (3) to protect life and safety from natural hazards.

ASPECT:

See VISUAL ASPECT .

ARIZONA STANDARDS FOR RANGELAND HEALTH AND GUIDELINES FOR GRAZING ADMINISTRATION:

Standards and guidelines developed collaboratively by BLM and the Arizona Resource Advisory Council (RAC) to address the minimum requirements of the Department of the Interior's final rule for Grazing Administration effective Aug. 21, 1995.

BACK COUNTRY BYWAY :

A component of the national scenic byway system which focuses primarily on corridors along back country roads which have high scenic, historic, archeological, or other public interest values. The road may vary from a single track bike trail to a low speed, paved road that traverses back country areas. (BLM Handbook H-8357-1, B 2)

BACK COUNTRY ZONE :

Areas with undeveloped, primitive, and self-directed visitor experience without provisions for motorized or mechanized access, except for designated routes. Also see FRONT COUNTRY ZONE and PASSAGE ZONE .

BASE FLOW (DISCHARGE) :

The portion of stream discharge derived from such natural storage sources as groundwater, large lakes, and swamps but not derived from direct runoff or flow from stream regulation, water diversion, or other human activities.

BASE HERD :

The constant livestock herd size that is continually licensed but may not be the same as the grazing (carrying) capacity. Also see GRAZING CAPACITY (CARRYING CAPACITY) .

BIOLOGICAL ASSESSMENT :

Information prepared by or under the direction of a Federal agency to determine whether a proposed action is likely to (1) harm threatened or endangered species or designated critical habitat, (2) jeopardize the existence of species that are proposed for listing, or (3) adversely modify proposed critical habitat. Biological assessments must be prepared for major

construction activities. The outcome of a biological assessment determines whether formal Section 7 consultation or a conference is needed. Also see BIOLOGICAL EVALUATION .

BIOLOGICAL DIVERSITY (BIODIVERSITY):

The full range of variability within and among living organisms and the ecological complexes in which they occur. Biological diversity encompasses ecosystem or community diversity, species diversity, and genetic diversity.

BIOLOGICAL EVALUATION :

The gathering and evaluation of information on proposed endangered and threatened species and critical and proposed critical habitat for actions that do not require a biological assessment. Also see BIOLOGICAL ASSESSMENT .

BIOLOGICAL OPINION :

A document that includes the following - (1) the opinion of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service as to whether a Federal action is likely to jeopardize the existence of a species listed as threatened or endangered or destroy or adversely modify designated critical habitat, (2) a summary of the information on which the opinion is based, and (3) a detailed discussion of the effects of the action on listed species or designated critical habitat.

BIOLOGICAL VEGETATION TREATMENT :

Methods of vegetation treatment that employ living organisms to selectively suppress, inhibit, or control herbaceous and woody vegetation. Examples of such methods include insects; pathogens; and grazing by cattle, sheep, or goats.

BIRDS OF CONSERVATION CONCERN :

As listed by the U.S. Fish and Wildlife Service, birds (other than threatened or endangered species) that are in greatest need of conservation action and without such action might become listed as threatened or endangered.

BLM SENSITIVE SPECIES :

See SENSITIVE SPECIES .

BURNBLOCK:

In prescribed burning, an area having uniform enough conditions of stand and fuel to be treated uniformly under a given burning prescription. The size of burnblocks ranges from the smallest that allows an economically acceptable cost per acre, up to the largest that can conveniently be treated in one burning period.

BURN OUT :

Setting fire inside a control line to widen it or consume fuel between the edge of the fire and the control line.

CANDIDATE SPECIES :

Species not protected under the Endangered Species Act, but being considered by the U.S. Fish and Wildlife Service for inclusion on the list of federally threatened and endangered species.

CANOPY:

The cover or leaves of branches formed by the tops or crowns of plants as viewed from above the cover measured by the vertical projection downward of the extent of the cover and expressed as a percentage of the ground so covered.

CARBON-14 DATING :

A method of estimating the age of an artifact containing carbon by measuring the radioactivity of its carbon-14 content to determine how long ago the specimen was separated from equilibrium with the atmosphere/plant/animal cycle. Continuously produced in the atmosphere by cosmic ray bombardment, carbon-14 decays with a half-life typically described as 5,568 years. An object is dated by comparing its carbon-14 activity per unit mass with that in a contemporary sample.

CARRYING CAPACITY (RECREATION) :

The amount of recreation use a given resource can sustain before the resource's quality begins to irreversibly deteriorate.

CARRYING CAPACITY (WILDLIFE) :

The most animals a specific habitat or area can support without causing deterioration or degradation of that habitat. Also see GRAZING CAPACITY (CARRYING CAPACITY) .

CASUAL USE (MINING) :

Mining that only negligibly disturbs Federal lands and resources and does not include the use of mechanized earth moving equipment or explosives or motorized equipment in areas closed to off-highway vehicles. Casual use generally includes panning, non-motorized sluicing, and collecting mineral specimens using hand tools.

CASUAL USE (RECREATION) :

Noncommercial or nonorganized group or individual activities on public land. Casual use does the following:

- complies with land use decisions and designations, i.e. special area designations,
- does not award cash prizes,
- is not publicly advertised
- poses minimal risk for damage to public land or related water resources, and
- generally requires no monitoring

If the use goes beyond those conditions, the activity should be treated as any other organized recreational group or competitive activity or event for which BLM would require the event organizer to obtain a special recreation permit (SRP).

CASUAL USE OF MINERAL MATERIALS :

Extracting mineral materials for limited personal (noncommercial) uses.

CATEGORICAL EXCLUSION :

A category of federal actions that do not individually or cumulatively have a significant effect on the human environment and for which an environmental impact statement or an environment assessment is required.

CHEMICAL VEGETATION TREATMENTS :

The applying of chemicals to control unwanted vegetation.

CLASS I AIR QUALITY RATING :

Under the Clean Air Act, the rating given areas of the country selected to receive the most stringent degree of air quality protection. Also see CLASS II AIR QUALITY RATING .

CLASS II AIR QUALITY RATING :

Under the Clean Air Act, the rating given areas of the country selected for somewhat less stringent protection from air pollution damage than Class I areas, except in specified cases. Also see CLASS I AIR QUALITY RATING .

COLONIZATION:

Occupation of an area by a group of organisms that previously did not occupy the area.

COMMUNITY:

A collective term used to describe an assemblage of organisms living together; an association of living organisms having mutual relationships among themselves and with their environment and thus functioning at least to some degree as an ecological unit.

COMPETITIVE RACES :

For purposes of this plan, all competitive events that have an element of speed as a component, including, motorcycle enduros, OHV desert racing, and equestrian endurance rides.

COMMUNITY RESOURCE UNIT (CRU) :

In social ecology, a subdivision of a human resource unit that shows the "catchment area" of a community, or its zone of influence, beyond which people relate to another community. Geographic features or settlement patterns often determine these boundaries. People in CRUs experience great face-to-face knowledge, and the caretaking systems through informal networks are the strongest. Also see HUMAN RESOURCE UNIT (HRU) .

CONSERVATION EASEMENT :

An interest in land which prohibits the landowner from doing things which otherwise would be lawful upon his estate in order to protect the natural resources of the property (e.g., open space, wildlife, riparian habitat, wetlands, etc.). Also see EASEMENT.

COOPERATIVE MANAGEMENT AGREEMENT :

A document that describes agreements made between BLM and the public on adjusting grazing use. This document also defines the specific adjustments and the schedule of adjustments (usually over a 5-year period).

COOPERATIVE RECREATION MANAGEMENT AREA (CRMA) :

An area for which BLM enters into a cooperative management agreement with a local government to manage recreation land.

CORRIDOR:

See DESIGNATED CORRIDOR .

COVER:

(1) Plants or plant parts, living or dead, on the surface of the ground; (2) plants or objects used by wild animals for nesting, rearing of young, escape from predators, or protection from harmful environmental conditions.

COW-CALF LIVESTOCK OPERATION :

A livestock operation that maintains a base breeding herd of mother cows and bulls. The cows produce a calf crop each year, and the operation keeps some heifer calves from each calf crop for breeding replacements. Between the ages of 6 and 12 months, the operation sells the rest of the calf crop along with old and nonproductive cows and bulls.

CRITERIA AIR POLLUTANTS :

Air pollutants for which acceptable levels of exposure can be determined and for which an ambient air quality standard has been set. Examples of such pollutants are ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and PM₁₀ and PM₂₅.

CRITERIA POLLUTANTS :

See CRITERIA AIR POLLUTANTS .

CRITICAL HABITAT, DESIGNATED :

Specific parts of an area (1) that are occupied by a federally listed threatened or endangered plant or animal at the time it is listed and (2) that contain physical or biological features essential to the conservation of the species or that may require special management or protection. Critical habitat may also include specific areas outside an area occupied by a federally listed species if the Secretary of the Interior determines that these areas are essential for conserving the species.

CULTURAL HERITAGE VALUES :

The irreplaceable qualities that are embodied in cultural resources, such as scientific information about prehistory and history, cultural significance to Native Americans and other groups, and the potential to enhance public education and enjoyment of the Nation's rich cultural heritage. Section 1 of the National Historic Preservation Act states that "the preservation of this irreplaceable heritage is in the public interest so that its vital legacy of cultural, educational, aesthetic, inspirational, economic, and energy benefits will be maintained and enriched for future generations of Americans."

CULTURAL RESOURCES:

A location of human activity, occupation, or use identifiable through field inventory, historical documentation, or oral evidence. Cultural resources include archaeological and historical sites, structures, buildings, objects, artifacts, works of art, architecture, and natural features that were important in past human events. They may consist of physical remains or areas where significant human events occurred, even though evidence of the events no longer remains. And they may include definite locations of traditional, cultural, or religious importance to specified social or cultural groups.

CULTURAL RESOURCE DATA :

Cultural resource information embodied in material remains such as artifacts, features, organic materials, and other remnants of past activities. An important aspect of data is context, a concept that refers to the relationships among these types of materials and the situations in which they are found.

CULTURAL RESOURCE DATA RECOVERY :

The professional application of scientific techniques of controlled observation, collection, excavation, and/or removal of physical remains, including analysis, interpretation, explanation, and preservation of recovered remains and associated records in an appropriate curatorial facility used as a means of protection. Data recovery may sometimes employ professional collection of such data as oral histories, genealogies, folklore, and related information to portray the social significance of the affected resources. Such data recovery is sometimes used as a measure to mitigate the adverse impacts of a ground-disturbing project or activity.

CULTURAL RESOURCE INTEGRITY :

The condition of a cultural property, its capacity to yield scientific data, and its ability to convey its historical significance. Integrity may reflect the authenticity of a property's historic identity, evidenced by the survival or physical characteristics that existed during its historic or prehistoric period, or its expression of the aesthetic or historic sense of a particular period of time.

CULTURAL RESOURCE INVENTORY (SURVEY) :

A descriptive listing and documentation, including photographs and maps of cultural resources. Included in an inventory are the processes of locating, identifying, and recording sites, structures, buildings, objects, and districts through library and archival research, information from persons knowledgeable about cultural resources, and on-the-ground surveys of varying intensity.

Class I: A professionally prepared study that compiles, analyzes, and synthesizes all available data on an area's cultural resources. Information sources for this study include published and unpublished documents, BLM inventory records, institutional site files, and state and National Register files. Class I inventories may have prehistoric, historic, and ethnological and sociological elements. These inventories are periodically updated to include new data from other studies and Class II and III inventories.

Class II: A professionally conducted, statistically based sample survey designed to describe the probable density, diversity, and distribution of cultural properties in a large area. This survey is achieved by projecting the results of an intensive survey carried out over limited parts of the target area. Within individual sample units, survey aims, methods, and intensities are the same as those applied in Class III inventories. To improve statistical reliability, Class II inventories may be conducted in several phases with different sample designs.

Class III: A professionally conducted intensive survey of an entire target area aimed at locating and recording all visible cultural properties. In a Class III survey, trained observers commonly conduct systematic inspections by walking a series of close-interval parallel transects until they have thoroughly examined an area.

CULTURAL RESOURCE PROJECT PLAN :

For cultural resource projects, a detailed design plan that defines the procedures, budget, and schedule for such activities as structure stabilization, recordation, interpretive development, and construction of facilities such as trails. These plans include estimates on workforce, equipment, and supply needs.

CULTURAL SITE :

A physical location of past human activities or events, more commonly referred to as an archaeological site or a historic property. Such sites vary greatly in size and range from the location of a single cultural resource object to a cluster of cultural resource structures with associated objects and features.

CUMULATIVE IMPACTS :

(40 CFR 1508.8) "...is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

DATA RECOVERY :

See CULTURAL RESOURCE DATA RECOVERY .

DECISION RECORD :

A manager's decision on a categorical exclusion review or an environmental assessment. Comparable to the record of decision for an environmental impact statement, the decision record includes - (1) a finding of no significant impact, (2) a decision to prepare an environmental impact statement, or (3) a decision not to proceed with a proposal. Also see RECORD OF DECISION .

DEFERRED ROTATION GRAZING :

Moving grazing animals to various parts of a range in succeeding years or seasons to provide for seed production, plant vigor, and seedling growth.

DESERT TORTOISE HABITAT CLASSIFICATIONS :

Three categories of desert tortoise habitat based on population, viability, size, density, and manageability and derived from BLM inventories of desert tortoise habitat throughout the planning areas between 1989 and 1999. The categories are as follows -

Category I: Medium to high tortoise density. Habitat area essential for maintaining large, viable populations.

Category II: Low to moderate tortoise density. Habitat is manageable.

Category III: Isolated patches of good habitat exist but are difficult to manage. Most management conflicts are not resolvable.

DESIGNATED CORRIDOR :

BLM's preferred route for placing rights-of-way for utilities (i.e. pipelines and powerlines) and transportation (i.e. highways and railroads).

DESIRED PLANT COMMUNITY :

The plant community that has been determined through a land use or management plan to best meets the plan's objectives for a site. A real, documented plant community that embodies the resource attributes needed for the present or potential use of an area, the desired plant

community is consistent with the site's capability to produce the required resource attributes through natural succession, management intervention, or a combination of both.

DISPERSED RECREATION :

Recreation that does not require developed sites or facilities.

EASEMENT:

The right to use land in a certain way granted by a landowner to a second party. Also see CONSERVATION EASEMENT .

ECOLOGICAL CONDITION :

See ECOLOGICAL SITE RATING (ECOLOGICAL CONDITION/ECOLOGICAL STATUS) .

ECOLOGICAL INTEGRITY :

The quality of a natural unmanaged or managed ecosystem in which the natural ecological processes are sustained, with genetic, species, and ecosystem diversity assured for the future.

ECOLOGICAL NICHE :

See NICHE.

ECOLOGICAL SITE (RANGE SITE) :

A distinctive kind of land that has specific physical characteristics and that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation.

ECOLOGICAL SITE DESCRIPTIONS (RANGE SITE GUIDE) :

Descriptions of the following characteristics of an ecological site - soils, physical features, climatic features, associated hydrologic features, plant communities possible on the site, plant community dynamics, annual production estimates and distribution of production throughout the year, associated animal communities, associated and similar sites, and interpretations for management.

ECOLOGICAL SITE INVENTORY :

The basic inventory of present and potential vegetation on BLM rangeland.

ECOLOGICAL SITE RATING (ECOLOGICAL CONDITION/ECOLOGICAL STATUS) :

The present state of vegetation of an ecological site in relation to the potential natural community for the site. Independent of the site's use, the ecological site rating is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a community resemble those of the potential natural community. The four ecological status classes correspond to 0-25 percent, 25-50 percent, 51-75 percent, or 76-100 percent similarity to the potential natural community and are called early-seral, mid-seral, late-seral, and potential natural community, respectively.

ECOSYSTEM:

Organisms, together with their abiotic environment, forming an interacting system and inhabiting an identifiable space.

ECOTOURISM:

Tourism that essentially focuses on natural rather than developed attractions with the goal of enhancing the visitor's understanding and appreciation of nature and natural features. Such tourism often attempts to be environmentally sound and to contribute economically to the local community.

ELIGIBLE RIVER SEGMENT :

Qualification of a river for inclusion in the National Wild and Scenic Rivers System by determining that it is free flowing and, with its adjacent land area, has at least one river-related value considered to be outstandingly remarkable.

ENDANGERED SPECIES :

Any animal or plant species in danger of extinction throughout all or a significant portion of its range as designated by the U.S. Fish and Wildlife Service under the Endangered Species Act. Also see THREATENED SPECIES .

ENDURO:

An off-road competition against the clock and usually over long distances.

ENVIRONMENTAL ASSESSMENT (EA) :

(40 CFR 1508.9)

"(a) Means a concise public document for which a Federal agency is responsible that serves to -

1. Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.
2. Aid an agency's compliance with the Act when no environmental impact statement is necessary.
3. Facilitate preparation of a statement when one is necessary.

(b) Shall include brief discussions of the need for the proposal, of alternatives as required by section 102 (2) (E), of the environmental impacts of the proposed action and Alternatives, and a listing of agencies and persons consulted." Also see ENVIRONMENTAL IMPACT STATEMENT (EIS) .

ENVIRONMENTAL IMPACT STATEMENT (EIS) :

(40 CFR 1508.11) "...means a detailed written statement as required by section 102 (2) (C) of the Act" (referring to the National Environmental Policy Act.) Also see ENVIRONMENTAL ASSESSMENT (EA) .

ENVIRONMENTAL JUSTICE (EJ) :

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," directs Federal agencies to assess whether their actions have disproportionately high and adverse human health or environmental effects on minority or low-income populations.

EPHEMERAL FORAGE :

Part-time or seasonal forage; forage produced by annual forage species.

EPHEMERAL STREAM :

A stream or portion of a stream that (1) flows only in direct response to precipitation, (2) receives little or no water from springs or no long continued supply from snow or other sources, and (3) has a channel that is always above the water table.

EXCLOSURE:

An area fenced to exclude animals.

EXOTIC:

An organism or species that is not native to the region in which it is found.

EXTENSIVE RECREATION MANAGEMENT AREA (ERMA) :

A blanket RMP allocation for recreation use made in a resource management plan for all BLM's land covered by the plan but not otherwise allocated in special recreation management areas or recreation management zones.

FACILITY FOOTPRINT :

The area on the ground defining or delineating the extent of the facility. For a building, it could be the outside edge of the foundation. For a parking lot, staging area, or trail head, it could be a barrier fence or artificial boundary that defines the limits of the particular use.

FAULT BLOCK MOUNTAINS (BLOCK MOUNTAINS) :

Mountains formed by block faulting which divides the earth's crust into fault blocks of different elevations and orientations.

FEDERAL LAND POLICY AND MANAGEMENT ACT (FLPMA) :

The act that - (1) set out, for the Bureau of Land Management, standards for managing the public lands including land use planning, sales, withdrawals, acquisitions, and exchanges; (2) authorized the setting up of local advisory councils representing major citizens groups interested in land use planning and management, (3) established criteria for reviewing proposed wilderness areas, and (4) provided guidelines for other aspects of public land management such as grazing.

FEE SIMPLE TITLE :

Unrestricted ownership of real property (i.e. land and whatever is erected or growing on it).

FINDING OF NO SIGNIFICANT IMPACT (FONSI) :

A document that is prepared by a federal agency and that briefly explains why an action not otherwise excluded from the requirement to prepare an environmental impact statement (EIS) would not significantly affect the human environment and not require an EIS.

FINE PARTICULATE MATTER (PM_{2.5}) :

Particulate matter that is less than 2.5 microns in diameter. Also see PARTICULATE MATTER and INHALABLE PARTICULATE MATTER (PM₁₀) .

FIRE INTENSITY :

The rate of heat release for an entire fire at a specific time.

FIRE MANAGEMENT :

The integration of fire protection, prescribed burning, and fire ecology knowledge into multiple use planning, decision making, and land management.

FIRE MANAGEMENT PLAN :

A plan that defines a program to manage wildland and prescribed fires and documents the fire management program in the approved land use plan.

FIRE SUPPRESSION :

All the work of extinguishing or confining a fire, beginning with its discovery.

FIRE SUPPRESSION RESOURCES :

People, equipment, services, and supplies available or potentially available for assignment to incidents.

FIXED STOCKING RATE :

A stocking rate that is fixed and cannot vary from season to season or year to year. Also see STOCKING RATE .

FLOODPLAIN:

Nearly level land on either or both sides of a channel that is subject to overflow flooding.

FORAGE:

All browse and herbage that is available and acceptable to grazing animals or that may be harvested for feed.

FORB:

An herbaceous plant that is not a grass, sedge, or rush.

FREE USE PERMIT :

A permit that allows the removal of timber or other resources from the public lands free of charge.

FRONT COUNTRY ZONE :

Focal areas for motorized and non-motorized visitation, concentrating use along major access routes. Also see BACK COUNTRY ZONE and PASSAGE ZONE .

FUEL BED (IN FIRE SUPPRESSION) :

The fuel composition in natural settings.

FUEL LOAD (IN FIRE SUPPRESSION):

The oven-dry weight of fuel per unit area usually expressed in tons/acre.

FUEL LOADING :

The amount of fuel present expressed by weight of fuel per unit area.

FUEL MOISTURE CONTENT (FUEL MOISTURE) (IN FIRE SUPPRESSION) :

The water content of a fuel expressed as a percentage of the fuel's oven-dry weight. For dead fuels, which have no living tissue, moisture content is determined almost entirely by relative humidity, precipitation, dry-bulb temperature, and solar radiation. The moisture content of live fuels is physiologically controlled within the living plant.

FUGITIVE DUST :

Dust particles that are introduced into the air through certain actions such as soil cultivation or vehicles crossing open fields or driving on dirt roads or trails.

FUNCTIONING WATERS (WILDLIFE) :

A well, catchment, spring, reservoir, or other feature (human made or natural) that provides a reliable source of potable water on a year-long basis. For such a source of water to be considered functional, the quality and quantity of water must be sufficient to sustain native wildlife populations in the local area. For example, a reservoir that fills up during monsoon rains but goes dry in a few weeks is not functional from a wildlife standpoint.

FUNDAMENTALS OF RANGELAND HEALTH :

As Described in 43 CFR 4180, the conditions in which (1) rangelands are in proper functioning physical condition, (2) ecological process are supporting healthy biotic populations and communities, (3) water quality is meeting state standards and BLM objectives, and (4) special status species habitat is being restored or maintained.

GENETIC DIVERSITY :

The variation in genes in a population pool that contributes to the ability of organisms to evolve and adapt to new conditions.

GRAZING CAPACITY (CARRYING CAPACITY) :

The highest livestock stocking rate possible without damaging vegetation or related resources. Grazing capacity may vary from year to year or in the same area because of fluctuating forage production.

GRAZING CYCLE :

The amount of time required for livestock to rotate completely through all the pastures under an allotment management plan.

GRAZING PERMIT/LICENSE/LEASE :

Official written permission to graze a specific number, kind, and class of livestock for a specified period on a defined rangeland.

GRAZING PRIVILEGES :

The use of public land for livestock grazing under permits or leases.

GRAZING REST :

Any period during which no livestock grazing is allowed within an area.

GRAZING SEASON :

An established period for which grazing permits are issued.

GRAZING SYSTEM :

A systematic sequence of grazing use and nonuse of an allotment to meet multiple use goals by improving the quality and amount of vegetation.

GROUND COVER :

See COVER.

GROUND LITTER :

See LITTER.

GROUNDWATER:

Subsurface water and underground streams that supply wells and springs. Use of groundwater in Arizona does not require a water right, but must only be "reasonable." Use of Groundwater in Arizona does not convey a water right; use must be "reasonable" and requires a permit from the Arizona Department of Water Resources. Water in the younger, floodplain alluvium is considered surface water. Water in the older, basin-fill alluvium is considered groundwater.

HABITAT:

An area that provides an animal or plant with adequate food, water, shelter, and living space.

HABITAT FRAGMENTATION :

Process by which habitats are increasingly subdivided into smaller units resulting in their increased insularity and losses of total habitat area.

HABITAT MANAGEMENT PLAN :

A site-specific wildlife habitat plan.

HAZARDOUS MATERIALS (HAZMAT) :

An all-encompassing term that includes hazardous substances; hazardous waste; hazardous chemical substances; toxic substances; pollutants and contaminants; and imminently hazardous chemical substances and mixtures that can pose an unreasonable risk to human health, safety, and property.

HERD AREA (HA) :

A geographic area occupied by a wild horse or burro herd and its habitat in 1971.

HERD MANAGEMENT AREA (HMA) :

An area established for maintaining wild horse and burro herds.

HISTORICAL SITE :

A location that was used or occupied after the arrival of Europeans in North America (ca. A.D. 1492). Such sites may consist of physical remains at archaeological sites or areas where significant human events occurred, even though evidence of the events no longer remains. They may have been used by people of either European or Native American descent.

HOHOKAM:

A group of North American Indians who lived between perhaps 300 BC and AD 1400 in central and southern Arizona, largely along the Gila and Salt Rivers.

HUMAN RESOURCE UNIT (HRU) :

An area that is roughly equivalent in size to a county but seldom corresponds to county boundaries. HRU boundaries are derived from the cultural descriptors listed below and by self-reporting by residents living in these areas.

- HRUs are characterized by frequent and customary interaction.
- HRUs reveal face-to-face human society where people could be expected to have personal knowledge of each other and where informal caretaking systems are the strongest.
- People's daily activities occur mainly within their HRU, including work, school, shopping, social activities, and recreation.
- Health, education, welfare, and other public services are highly organized at this level, with a town or community almost always as its focal point.
- An HRU is characterized by a sense of place, a sense of identity with the land and the people, a sense of a common understanding of how the resources of their HRU should be managed, and a common understanding of how things are normally done at this territorial level.
- The regularity of interaction within an HRU reinforces a recognition and identification by the residents of natural and human-made features as "home."

- Because of this familiarity, boundaries between HRUs are clearly defined in the minds of those living within them.

Also see COMMUNITY RESOURCE UNIT (CRU) .

HYDRIC:

Characterized by, relating to, or requiring an abundance of moisture.

HYDROLOGIC CYCLE :

The circuit of water movement from the atmosphere to the earth and its return to the atmosphere through various stages or processes, such as precipitation, interception, runoff, infiltration, percolation, storage, evaporation, and transpiration.

IGNEOUS ROCK :

Rock, such as granite and basalt, which has solidified from a molten or partially molten state.

INCIDENT:

A human-caused or natural occurrence, such as wildland fire, that requires emergency action to prevent or reduce the loss of life or damage to property or natural resources.

INCIDENT COMMANDER :

The person responsible for managing all operations in response to incidents (i.e. wildfires and other events requiring emergency action).

INDICATORS:

Elements of the human environment affected, or potentially affected, by a change agent. An indicator can be a structural component, a functional process or an index. A key indicator integrates several system elements in such a way as to indicate the general health of that system.

INDUSTRIAL MINERALS :

All minerals that humans extract from the earth's crust except for fuels, metallic ores, water and gemstones.

INFILTRATION:

The downward entry of water into the soil or other material.

INFRASTRUCTURE:

The set of systems and facilities that support a region or community's social and economic structures. Examples of such systems include energy, transportation, communication, education, medical service, and fire and police protection.

INHALABLE PARTICULATE MATTER (PM₁₀) :

Particulate matter in ambient air exceeding 10 microns in diameter. Also see PARTICULATE MATTER and FINE PARTICULATE MATTER (PM_{2.5}) .

INHOLDING:

Parcels of land owned or managed by someone other than BLM but surrounded in part or entirely by BLM-administered land.

INITIAL ATTACK :

The actions taken by the first resources to arrive at a wildland fire to protect lives and property and prevent further extension of the fire.

INSTREAM WATER USE :

Water use within a stream channel for such purposes as navigation, recreation, fish and wildlife preservation, water quality improvement, and hydroelectric power generation.

INSTREAM (FLOW) WATER RIGHT :

A non-consumptive, State-based water right that keeps water in the stream. In Arizona, an instream flow water right may be obtained for wildlife, fish and recreation purposes. Also see INSTREAM WATER USE .

INTERMITTENT STREAM :

A stream that generally flows during wet seasons, but is dry during dry seasons.

INVASIVE SPECIES (INVADERS) :

Plant species that were either absent or present only in small amounts in undisturbed portions of a specific range site's original vegetation and invade following disturbance or continued overuse.

KEY FORAGE SPECIES :

Forage species whose use serves as an indicator of the degree of use of associated species.

LAND USE AUTHORIZATION :

BLM's authorizing through leases, permits, and easements of uses of the public land. Land use authorizations may allow occupancy, recreational residences and cabin sites, farming, manufacturing, outdoor recreation concessions, National Guard maneuvers, and many other uses.

LEASABLE MINERALS :

Minerals whose extraction from federally managed land requires a lease and the payment of royalties. Leasable minerals include coal, oil and gas, oil shale and tar sands, potash, phosphate, sodium, and geothermal steam.

LEAVE NO TRACE :

A nationwide (and international) program to help visitors with their decisions when they travel and camp on America's public lands. The program strives to educate visitors about the nature of their recreational impacts as well as techniques to prevent and minimize such impacts.

LITTER:

The uppermost layer of organic debris on the soil surface, essentially freshly fallen or slightly decomposed vegetal material.

LIVE FUEL MOISTURE :

See FUEL MOISTURE CONTENT (FUEL MOISTURE) (IN FIRE SUPPRESSION) .

LIVESTOCK TRESPASS :

The unauthorized grazing of livestock.

LOAM:

A soil texture class for soil material that contains 7 to 27% clay, 28 to 50% silt, and less than 52% sand.

LOCATABLE MINERALS :

Minerals that may be acquired under the Mining Law of 1872, as amended.

LOCATION:

The act of taking or appropriating a parcel of mineral land, including the posting of notices, the recording thereof when required, and marking the boundaries so they can be readily traced.

MAINTENANCE (ROAD) :

(From BLM 9100 Manual) The work required keeping a facility in such a condition that it may be continuously utilized at its original or designed capacity and efficiency, and for its intended purposes. Road or trail maintenance actions include (a) signage, (b) minor repairs, e.g. correction of drainage, erosion, or vegetation interference problems. Upon performance of condition assessment, maintenance could also be construed as (c) allowing road or trail to remain in present state for regular and continuous use.

MANAGE FOR WILDERNESS CHARACTERISTICS (MWC) AREAS :

Areas that contain values such as outstanding opportunities for primitive and unconfined recreation or outstanding opportunities for solitude and a few human intrusions, where preservation of these values represents a major management focus.

MAJOR LAND RESOURCE AREAS (MLRAs) :

Broad geographic areas that have a particular pattern of soils, climate, water resources, vegetation, and land use. Each MLRA in which range and forest land occur is further broken into range sites.

MAJOR RIGHTS-OF-WAY :

Rights-of-way along which pass transmission lines (consisting of 115kV or higher) used to transmit large blocks of energy to load centers for distribution.

MANAGEMENT SITUATION ANALYSIS (MSA) :

See ANALYSIS OF THE MANAGEMENT SITUATION (AMS) .

MANUAL VEGETATION TREATMENTS :

The use of hand-operated power tools and hand tools to cut, clear, or prune herbaceous and woody plants. In manual treatments, workers cut plants above ground level; pull, grub, or dig out plant root systems to prevent later sprouting and regrowth; scalp at ground level or remove competing plants around desired vegetation; or place mulch around desired vegetation to limit the growth of competing vegetation. Manual vegetation treatments cause less ground disturbance and generally remove less vegetation than prescribed fire or mechanical treatments.

MECHANICAL VEGETATION TREATMENTS :

The use of mechanical equipment to suppress, inhibit, or control herbaceous and woody vegetation. BLM uses wheeled tractors, crawler-type tractors, mowers, or specially designed vehicles with attached implements for such treatments.

MINERAL ENTRY :

The filing of a claim on public land to obtain the right to any minerals it may contain.

MINERALIZATION:

Evidence of the presence of minerals.

MINERAL MATERIAL DISPOSAL :

The disposal through sale or free use permit of sand, gravel, decorative rock, or other materials defined in 43 CFR 3600.

MINERAL MATERIALS :

Materials such as common varieties of sand, stone, gravel, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws but that can be acquired under the Mineral Materials Act of 1947, as amended.

MINERALS PLANNING AREA :

The area with federally administered minerals, where (1) the surface rights are held by BLM, the State of Arizona, or private parties, and located within the administrative boundaries of BLM's Phoenix Field Office but (2) are not being planned for in the Sonoran Desert National Monument RMP and Phoenix South RMP Revision.

MINING DISTRICT :

An area, usually designated by name, with described or understood boundaries, where minerals are found and mined under rules prescribed by the miners, consistent with the Mining Law of 1872.

MINING PLAN OF OPERATIONS :

A plan for mineral exploration and development that a mining operator must submit to BLM for approval for all mining, milling, and bulk sampling of more than 1,000 tons and for exploration disturbing more than 5 acres or on special status lands, including wilderness, areas of critical environmental concern, national monuments, national conservation areas, and lands containing proposed or listed threatened or endangered species or their critical habitat. A plan of operations must document in detail all actions that the operator plans to take from exploration through reclamation.

MONITORING:

The collection of information to determine the effects of resource management and detect changing resource trends, needs, and conditions.

MOSAIC:

A pattern of vegetation in which two or more kinds of communities are interspersed in patches.

MOTORIZED TRAIL :

A designated route that allows for the use of small-wheel-based motorized vehicles such as all-terrain vehicles and motorcycles.

MULTIPLE USE :

A combination of balanced and diverse resource uses that considers long-term needs for renewable and nonrenewable resources including recreation, wildlife, rangeland, timber, minerals, and watershed protection, along with scenic, scientific, and cultural values.

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) :

The allowable concentrations of air pollutants in the ambient (public outdoor) air specified in 40 CFR 50. National ambient air quality standards are based on the air quality criteria and divided into primary standards (allowing an adequate margin of safety to protect the public health including the health of "sensitive" populations such as asthmatics, children, and the elderly) and secondary standards (allowing an adequate margin of safety to protect the public welfare). Welfare is defined as including effects on soils, water, crops, vegetation, human-made materials, animals, wildlife, weather, visibility, climate, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) :

The Federal law, effective January 1, 1970, that established a national policy for the environment and requires federal agencies - (1) to become aware of the environmental ramifications of their proposed actions, (2) to fully disclose to the public proposed Federal actions and provide a mechanism for public input to Federal decision-making, and (3) to prepare environmental impact statements for every major action that would significantly affect the quality of the human environment.

NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED (NHPA) :

A Federal statute that established a Federal program to further the efforts of private agencies and individuals in preserving the Nation's historic and cultural foundations. The National Historic Preservation Act - (1) authorized the National Register of Historic Places, (2) established the Advisory Council on Historic Preservation and a National Trust Fund to administer grants for historic preservation, and (3) authorized the development of regulations to require Federal agencies to consider the effects of federally assisted activities on properties included on or eligible for the National Register of Historic Places. Also see NATIONAL REGISTER OF HISTORIC PLACES .

NATIONAL HISTORIC TRAIL :

One of the three categories of national trails defined in the National Trails System Act of 1968 that can only be established by act of Congress and are administered by Federal agencies, although part or all of their land base may be owned and managed by others. National historic trails are generally more than 100 miles long and follow as closely as possible and practicable the original trails or routes of travel of national historic significance. Their purpose is identifying and protecting the historic route and its remnants and artifacts for public use and enjoyment.

NATIONAL MONUMENT :

An area designated to protect objects of scientific and historic interest by public proclamation of the President under the Antiquities Act of 1906, or by Congress for historic landmarks,

historic and prehistoric structures, or other objects of historic or scientific interest on public lands. Designation also provides for the management of these features and values.

NATIONAL RECREATION TRAIL :

One of the three categories of national trails defined in the National Trails System Act of 1968 that can only be established by act of Congress and are administered by federal agencies, although part or all of their land base may be owned and managed by others. National Recreation Trails are existing regional and local trails recognized by either the Secretary of Agriculture or the Secretary of the Interior upon application.

NATIONAL REGISTER DISTRICT :

A group of significant archaeological, historical, or architectural sites, within a defined geographic area, that is listed on the National Register of Historic Places. See NATIONAL REGISTER OF HISTORIC PLACES .

NATIONAL REGISTER OF HISTORIC PLACES :

The official list, established by the National Historic Preservation Act, of the Nation's cultural resources worthy of preservation. The National Register lists archeological, historic, and architectural properties (i.e. districts, sites, buildings, structures, and objects) nominated for their local, state, or national significance by state and federal agencies and approved by the National Register Staff. The National Park Service maintains the National Register. Also see NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED (NHPA) .

NATIONAL REGISTER ELIGIBLE PROPERTIES :

Cultural resource properties that meet the National Register criteria and have been determined eligible for nomination to the National Register of Historic Places because of their local, state, or national significance. Eligible properties generally are older than 50 years and have retained their integrity. They meet one or more of four criteria - (a) associated with events that have made a significant contribution to the broad patterns of our history; (b) associated with the lives of persons significant in our past; (c) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master; and (d) have yielded, or may be likely to yield, information important in prehistory or history.

NATIONAL WILD AND SCENIC RIVERS SYSTEM :

A system of nationally designated rivers and their immediate environments that have outstanding scenic, recreational, geologic, fish and wildlife, historical, cultural, and other similar values and are preserved in a free-flowing condition. The system consists of three types of streams - (1) recreation—rivers or sections of rivers that are readily accessible by road or railroad and that may have some development along their shorelines and may have undergone some impoundments or diversion in the past, (2) scenic—rivers or sections of rivers free of impoundments with shorelines or watersheds still largely undeveloped but accessible in places by roads, and (3) wild—rivers or sections of rivers free of impoundments and generally inaccessible except by trails with watersheds or shorelines essentially primitive and waters unpolluted.

NATIVE DIVERSITY :

The diversity of species that have evolved in a given place without human influence.

NATIVE SPECIES :

A species that is part of an area's original flora and fauna.

NEOTROPICAL MIGRATORY BIRDS :

Birds that travel to Central America, South America, the Caribbean, and Mexico during the fall to spend the winter and then return to the United States and Canada during the spring to breed. These birds include almost half of the bird species that breed in the United States and Canada.

NICHE:

The role of an organism in the environment, its activities and relationships to the biotic and abiotic environment.

NITROGEN OXIDES (OXIDES OF NITROGEN, NO_x):

A general term for compounds of nitric oxide (NO), nitrogen dioxide (NO₂), and other oxides of nitrogen. Nitrogen oxides are typically created during combustion and are major contributors to smog formation and acid deposition. NO₂ is a criteria air pollutant and may have many adverse health effects.

NONATTAINMENT AREA :

An area in which the level of a criteria air pollutant is higher than the level allowed by the federal standards. A single area may have acceptable levels of one criteria air pollutant but unacceptable levels of one or more other criteria air pollutants. Therefore, an area can be both attainment and non-attainment at the same time.

NONPOINT SOURCE POLLUTION (WATER) :

Pollution sources that are diffuse and do not have a single point of origin or are not introduced into a receiving water body from a specific outlet. These pollutants are generally carried off the land by storm water runoff from such sources as farming, forestry, mining, urban land uses, construction, and land disposal.

NOXIOUS WEED :

the Federal Noxious Weed Act, 1974 (PL 930629) defines a noxious weed as, "any living stage (including seeds and reproductive parts) of a parasitic or other plant of a kind which is of foreign origin, is new to or not widely prevalent in the U.S., and can directly or indirectly injure crops, other useful plants, livestock, poultry or other interests of agriculture, including irrigation, navigation, fish and wildlife resources, or the public health."

NUTRIENT CYCLE :

A general term for the movement of any particular life essential substance through the physical and biological environment. Essential nutrient cycles include those of carbon, nitrogen, oxygen, and water.

OFF-HIGHWAY VEHICLE (OHV) :

Any vehicle capable of or designed for travel on or immediately over land, water, or other natural terrain (deriving motive power from any source other than muscle.) OHVs exclude (1) any nonamphibious registered motorboat; (2) any fire, emergency, or law enforcement vehicle while being used for official or emergency purposes; and (3) any vehicle whose use is expressly authorized by a permit, lease, license, agreement, or contract issued by an authorized officer or otherwise approved. (43 CFR 8340.0-5)

OFF-ROAD VEHICLE (ORV) :

See OFF-HIGHWAY VEHICLE (OHV) .

OFFSET:

A method used in the 1990 Clean Air Act to give companies that own or operate large sources in nonattainment areas flexibility in meeting overall pollution reduction requirements when changing production processes. If the operator or owner of the source wants to increase the release of a criteria air pollutant, an offset (reduction of a somewhat greater amount of the same pollutant) must be obtained either at the same plant or by buying offsets from another company.

OUTSTANDING NATURAL AREA (ONA) :

ACECs which contain unusual natural characteristics and are managed primarily for educational and recreational purposes.

PALEONTOLOGICAL RESOURCES :

The remains of plants and animals preserved in soils and sedimentary rock. Paleontological resources are important for understanding past environments, environmental change, and the evolution of life.

PASSAGE ZONE :

Lands along secondary travel routes where visitor or other uses would not be directed or encouraged, but could be accommodated. Also see BACK COUNTRY ZONE and FRONT COUNTRY ZONE .

PATENT:

The instrument by which the Federal Government conveys title to the public lands.

PAYMENTS IN LIEU OF TAXES (PILT) :

Payments made to counties by BLM to mitigate losses because public lands cannot be taxed. BLM calculates the amount of payments using a formula based on population and the amount of Federal land in a particular local jurisdiction. These payments are in addition to federal revenues transferred to local governments under other programs, such as income generated from timber harvests, mineral receipts, and the use of federal land for livestock grazing.

PARTICULATE MATTER :

Fine liquid or solid particles suspended in the air and consisting of dust, smoke, mist, fumes, and compounds containing sulfur, nitrogen, and metals. Also see FINE PARTICULATE MATTER (PM_{2.5}) and INHALABLE PARTICULATE MATTER (PM₁₀) .

PASTURE:

A grazing area that is separated from other areas by fencing or natural barriers.

PEDESTALLING:

The removal of soil from the base of a plant, exposing the roots. Pedestalling is often a result of wind and streambank erosion.

PERENNIAL PLANT :

A plant that has a life cycle of 3 or more years. Also see ANNUAL PLANT .

PERENNIAL STREAM :

A stream that flows continuously during all seasons of the year.

PERMEABILITY, SOIL :

The ease with which gases, liquids, or plant roots penetrate or pass through a bulk mass of soil or a layer of soil.

PERMITTEE:

A person or company permitted to graze livestock on public land.

PERMIT TYPES AND DEFINITIONS :

Commercial Use: The activity, service, or use is commercial if:

- Any person, group, or organization makes or attempts to make a profit, receive money, amortize equipment, or obtain goods or services, as compensation from participants in recreational activities occurring on public lands led, sponsored, or organized by that person, group, or organization;
- Anyone collects a fee or receives other compensation that is not strictly a sharing of actual expenses, or exceeds actual expenses, incurred for the purposes of the activity, service, or use;
- There is paid public advertising to seek participants; or
- Participants pay for a duty of care or an expectation of safety.

Competitive Use: Any organized, sanctioned, or structured use, event, or activity on public land in which two or more contestants compete and either or both of the following elements apply -

- Participants register, enter, or complete an application for the event;
- A predetermined course or area is designated;

Or, one or more individuals contesting an established record such as for speed or endurance.

Organized Group Activity and Event Use: A structured, ordered, consolidated, or scheduled event on, or occupation of, public lands for the purpose of recreational use that is not commercial or competitive.

Vending: The sale of goods or services, not from a permanent structure, associated with recreation on the public lands or related waters, such as food, beverages, clothing, firewood, souvenirs, filming or photographs (video or still), or equipment repairs.

PERSONAL INCOME :

The sum of wage and salary payments, other labor income, proprietors' income, rental income of persons, personal dividend and interest income, and transfer payments to persons, less personal contributions for social insurance.

PETROGLYPH:

Pictures, symbols, or other art work pecked, carved, or incised on natural rock surfaces.

PILT:

See PAYMENTS IN LIEU OF TAXES (PILT) .

PITHOUSE:

A type of house built partly underground by prehistoric people.

PLACER CLAIM:

A mining claim located on surficial or bedded deposits, particularly for gold located in stream gravels.

PLAN OF OPERATIONS:

See MINING PLAN OF OPERATIONS .

PLANT SUCCESSION :

The process of vegetational development by which an area becomes successively occupied by different plant communities of higher ecological order.

PLANT VIGOR :

The relative wellbeing and health of a plant as reflected by its ability to manufacture enough food for growth and maintenance.

PM_{2.5} PARTICULATES :

Tiny particles with an aerodynamic diameter of 2.5 microns or less. These particles penetrate most deeply into the lungs.

PM₁₀ PARTICULATES :

A criteria air pollutant consisting of small particles with an aerodynamic diameter of 10 microns or less. Their size allows them to enter the air sacs deep within the lungs where they may be deposited in have adverse health effects. These particles include dust, soot, and other tiny bits of solid materials in the air.

POKER RUN :

a noncompetitive off-highway vehicle ride where riders have a choice of two or more clearly marked loop courses and pass several checkpoints to the finish line. After finishing the course, participants will draw poker hands for cash or other prizes.

POOL:

A portion of a stream that has reduced current velocity and often water deeper than surrounding areas and that is frequently usable by fish for resting and cover.

POPULATION:

A group of interbreeding organisms of the same kind occupying a particular space; a group of individuals of a species living in a certain area.

PORPHYRY COPPER :

A disseminated replacement deposit in which copper minerals occur as discrete grains and veinlets throughout a large volume of rock; a large-tonnage, low-grade copper deposit.

POTENTIAL NATURAL COMMUNITY (PNC) :

The stable biotic community that would become established on an ecological site if all successional stages were completed without human interference under present environmental conditions. The PNC is the vegetation community best adapted to fully use the resources of an ecological site.

PRESCRIBED FIRE (BURNING) :

The planned applying of fire to rangeland vegetation and fuels under specified conditions of fuels, weather, and other variables to allow the fire to remain in a predetermined area to achieve such site-specific objectives as controlling certain plant species; enhancing growth, reproduction, or vigor of plant species; managing fuel loads; and managing vegetation community types.

PRIMARY ROAD :

See ROAD AND ROUTE TYPES - .

PRIME FARMLAND :

As defined by the Farmland Protection Policy Act of 1981, land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion, as determined by the Secretary of Agriculture. Prime farmland includes land with the above characteristics, but is being used to produce livestock and timber. It does not include land already in or committed to urban development or water storage. Also see UNIQUE FARMLAND .

PRIMITIVE RECREATION :

Recreation that provides opportunities for isolation from the evidence of humans, a vastness of scale, feeling a part of the natural environment, having a high degree of challenge and risk, and using outdoor skills. Primitive recreation is characterized by meeting nature on its own terms, without comfort or convenience of facilities.

PRIMITIVE ROAD:

A linear route managed for use by four-wheel drive or high-clearance vehicles. These routes do not normally meet any BLM road design standards.

PROPER FUNCTIONING CONDITION (RIPARIAN-WETLAND AREAS) :

The condition where - (1) enough vegetation, landform, or large woody debris is present to dissipate the stream energy of high water flows, thereby reducing erosion and improving water quality; (2) sediments are filtered, bedload is captured, and floodplains develop; (3) flood water retention and ground water recharge are improved, root masses that stabilize streambanks against cutting action develop, and diverse ponding and channel characteristics are created to provide the habitat and the water depth, duration, and temperature needed for fish production, waterfowl breeding, and other uses; and (4) greater biodiversity is supported.

PROSPECTIVELY VALUABLE FOR OIL AND GAS :

Known or believed to contain oil and gas deposits that have, or at some time in the future, proven economic value.

PUBLIC DOMAIN LANDS :

Lands that are part of the original public domain and have never left federal ownership and lands in federal ownership that were acquired in exchange for public domain lands or for timber on public domain lands.

PUBLIC LAND ORDER :

An order effecting, modifying, or canceling a withdrawal or reservation. Such an order is issued by the Secretary of the Interior pursuant to powers of the President delegated to the Secretary by Executive Order No.9146 of April 24, 1943.

PUBLIC LANDS :

As defined by Public Law 94-579 (Federal Land Policy and Management Act of 1976), lands and interest in land owned by the United States and administered by the Secretary of the Interior through BLM, regardless of how the United States acquired possession. In common usage, public lands may refer to all federal land no matter what agency manages it. Also see ACQUIRED PUBLIC LANDS .

PUBLIC USE LEVELS :

Three sets of proposed management actions for the interpretive use of archaeological sites in the Agua Fria National Monument, varying in the intensity of development and number of facilities. Example actions for each of these levels can be found in the Cultural Resources discussion of the Management Common to the AFNM section of Chapter 2.

PUEBLO:

A Spanish word meaning "town" or "village" and used to describe an Indian village of apartment-type building with one or more stories. Pueblos are built of adobe or stone and have flat roofs.

RANGE IMPROVEMENT :

Any activity or program on or relating to the public lands designed to improve forage production, change vegetation composition, control use patterns, provide water, stabilize soil and water conditions, or provide habitat for livestock and wildlife. Range improvements may be structural or nonstructural. A structural improvement requires placement or construction to facilitate the management or control the distribution and movement of animals. Such improvements may include fences, wells, troughs, reservoirs, pipelines, and cattleguards. Nonstructural improvements consist of practices or treatments that improve resource conditions. Such improvements include seedings; chemical, mechanical, and biological plant control; prescribed burning; water spreaders; pitting; chiseling; and contour furrowing.

RANGELAND:

A kind of land on which the native vegetation, climax, or natural potential consists predominately of grasses, grasslike plants, forbs, or shrubs. Rangeland includes lands revegetated naturally or artificially to provide a plant cover that is managed like native vegetation. Rangelands may consist of natural grasslands, savannas, shrublands, moist deserts, tundra, alpine communities, coastal marshes, and wet meadows.

RANGELAND ECOLOGICAL SITE :

A distinctive kind of land that has specific physical characteristics and that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation.

RANGE SITE :

See ECOLOGICAL SITE (RANGE SITE) .

RANGE SITE GUIDE :

See ECOLOGICAL SITE DESCRIPTIONS (RANGE SITE GUIDE) .

RAPTORS:

Birds of prey.

REACH:

A relatively homogeneous section of a stream having a repetitious sequence of physical characteristics and habitat types.

RECHARGE:

See AQUIFER RECHARGE .

RECLAIMING OR RECLAIMED (ROUTE) :

See ROAD AND ROUTE TYPES - .

RECORD OF DECISION :

A document signed by a responsible official recording a decision that was preceded by the preparing of an environmental impact statement. Also see DECISION RECORD .

RECREATION AND PUBLIC PURPOSES ACT of 1926 (44 Stat. 741, as amended; 43 U.S.C. 869 et seq.):

An act of Congress that allows lease or acquisition of public land to be used for recreation or public purposes by local government entities (county or city governments) and nonprofit organizations.

RECREATION MANAGEMENT ZONES (RMZs) :

Areas within special recreation management areas (SRMAs) with a particular recreation management focus or resource challenges. See SPECIAL RECREATION MANAGEMENT AREAS (SRMAs) .

RECREATION OPPORTUNITY SPECTRUM (ROS) :

A planning process that provides a framework for defining classes of outdoor recreation environments, activities, and experience opportunities. In ROS, the setting, activities, and opportunities for experiences are arranged along a spectrum of six classes: primitive; semi-primitive non-motorized; semi-primitive motorized; roaded natural; rural; and urban. The resulting ROS analysis defines specific geographic areas on the ground, each of which encompasses one of the six classes.

RECREATION SETTINGS :

Settings described in the recreation opportunity spectrum (ROS) inventory method, reflecting degrees of remoteness, evidence of humans, and social qualities.

RECREATION ZONE :

A planned and delineated area with designated recreation opportunities, settings, and activities.

RECRUITMENT:

The increase in population caused by natural reproduction or immigration.

REFUGIUM:

An area that has remained unaffected by adverse environmental changes to the surrounding area, allowing a population to survive where others have perished.

REPLACEMENT DEPOSIT :

A mineral deposit formed by a new mineral of partly or wholly differing chemical composition growing in the body of an old mineral or aggregate.

RESEARCH NATURAL AREA (RNA) :

An area of critical environmental concern that is a physical or biological unit in which current natural conditions are maintained insofar as possible. In RNAs activities such as grazing and vegetation manipulation are prohibited unless they replace natural processes and contribute to protecting and preserving an area. Moreover, such recreation as camping and gathering plants is discouraged.

RESEARCH DESIGN :

A statement of proposed identification, documentation, evaluation, investigation, or other research that identifies the project's goals, methods and techniques, expected results, and the relationship of the expected results to other proposed activities or treatments.

RESISTANCE TO CONTROL (WILDFIRE) :

The relative difficulty of building and holding a fire control line as affected by fire behavior, fuel, topography, and soil.

RESOURCE ADVISORY COUNCILS (RACs) :

Advisory councils appointed by the Secretary of the Interior and consisting of representatives of major public land interest groups (e.g. commodity industries, recreation, environmental, and local area interests) in a state or smaller area. RACs advise BLM, focusing on a full array of multiple use public land issues. RACs also help develop fundamentals for rangeland health and guidelines for livestock grazing.

RESOURCE CONSERVATION AREA (RCA) :

A land management designation that provides management consideration to areas that have special resources but don't need the protection conferred by an area of critical environmental concern.

RESOURCE MANAGEMENT PLAN (RMP) :

(43 CFR 1601.0-5 (k)) "...a land use plan as described by the Federal Land Policy and Management Act. The resource management plan generally establishes in a written document

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1. Land areas for limited, restricted or exclusive use; designation, including ACEC designation; and transfer from Bureau of Land Management Administration;
2. Allowable resource uses (either singly or in combination) and related levels of production or use to be maintained;
3. Resource condition goals and objectives to be attained;
4. Program constraints and general management practices needed to achieve the above items;
5. Need for an area to be covered by more detailed and specific plans;
6. Support action, including such measures as resource protection, access development, realty action, cadastral survey, etc., as necessary to achieve the above;
7. General implementation sequences, where carrying out a planned action is dependent upon prior accomplishment of another planned action; and
8. Intervals and standards for monitoring and evaluating the plan to determine the effectiveness of the plan and the need for amendment or revision.

It is not a final implementation decision on actions which require further specific plans, process steps, or decisions under specific provisions of law and regulations."

REST:

See GRAZING REST .

RESTORATION (CULTURAL RESOURCE) :

The process of accurately reestablishing the form and details of a property or portion of a property together with its setting, as it appeared in a particular period of time. Restoration may involve removing later work that is not in itself significant and replacing missing original work. Also see STABILIZATION (CULTURAL RESOURCE).

REST-ROTATION GRAZING :

A grazing system in which one part of the range is ungrazed for an entire grazing year or longer while other parts are grazed for a portion or all of a growing season.

RIGHT-OF-WAY :

A permit or easement that authorizes the use of lands for certain specified purposes, commonly for pipelines, roads, telephone lines, or powerlines.

RILL:

A narrow, very shallow (a few centimeters deep), intermittent water course having steep sides and formed as a result of erosion.

RIPARIAN:

Pertaining to or situated on or along the bank of streams, lakes, and reservoirs.

RIPARIAN AREA :

A form of wetland transition between permanently saturated wetlands and upland areas. Riparian areas exhibit vegetation or physical characteristics that reflect the influence of permanent surface or subsurface water. Typical riparian areas include lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams, glacial potholes, and the shores of lakes and reservoirs with stable water levels. Excluded are ephemeral streams or washes that lack vegetation and depend on free water in the soil.

ROAD:

(From BLM 9100 manual) ...a transportation facility used primarily by vehicles having four or more wheels, documented as such by the owner, and maintained for regular and continuous use.

ROADSIDE:

a general term denoting the area adjoining the outer edge of the road.

ROAD AND ROUTE TYPES - :

Primary Road - A regularly maintained route, paved or unpaved, wide enough for at least two vehicles to pass. Provides access between two major points. Serves a large area with many routes of lesser quality branching from it.

Secondary Road - Paved or unpaved, a regularly maintained one- to two-lane route with routes of lesser quality branching from it. Connects primary roads and major points.

Tertiary Road - Generally a two-track route that may or may not be usable by a two-wheel drive vehicle. Does not receive formal maintenance.

Single-Track Route - A route up to 1/2 meter wide upon which all-terrain vehicles or trucks are not allowed.

Way - A road-like feature used by vehicles having four or more wheels but not declared a road by the owner. A way receives no maintenance to guarantee regular and continuous use.

Spur - A route that exists for a specific purpose, such as access to a specific use or feature. Uses can be recreational or commercial. Features include campsites, mines, or range developments. A spur route is connected to another road or route type.

Reclaiming or Reclaimed (route) - A route that has had very little or no use, so that there is woody vegetation growing in the route that would be damaged by the passage of a vehicle. Erosion or vegetation may block the route and could damage a vehicle or cause it to get stuck.

ROCK CRAWLING :

The use of specialized motor vehicles for crossing difficult terrain. Also known as extreme technical trail driving.

ROUTE :

Any motorized, non-motorized, or mechanized transportation corridor. Corridor may either be terrestrial or waterway. "Roads" and "Trails" are considered routes.

SALABLE MINERALS :

Common variety minerals on public lands, such as sand and gravel, which are used mainly for construction and are disposed of by sales or special permits to local governments.

SCIENTIFIC DATA RECOVERY :

See CULTURAL RESOURCE DATA RECOVERY .

SCOPING:

An early and open process for determining the scope of issues to be addressed in an environmental impact statement and the significant issues related to a proposed action.

SEASONAL GRAZING :

Grazing restricted to a specific season.

SECONDARY ROAD :

See ROAD AND ROUTE TYPES - .

SECTION:

640 acres, 1 mile square.

SECTION 404 PERMIT :

A permit required by the Clean Water Act, under specified circumstances, when dredge or fill material is placed in the waters of the United States, including wetlands.

SECTION 7 CONSULTATION :

The requirement of Section 7 of the Endangered Species Act that all federal agencies consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service if a proposed action might affect a federally listed species or its critical habitat.

SEGREGATION:

The removal for a limited period, subject to valid existing rights, of a specified area of the public lands from the operation of the public land laws, including the mining laws, pursuant to the exercise by the Secretary of the Interior of regulatory authority to allow for the orderly administration of the public lands. See WITHDRAWAL.

SENSITIVE SPECIES :

All species that are under status review, have small or declining populations, live in unique habitats, or need special management. Sensitive species include threatened, endangered, and proposed species as classified by the U.S. Fish and Wildlife Service.

SHARED USE TRAIL :

A trail shared for a variety of uses such as motorized and non-motorized uses; a combination of non-motorized uses such as hiking, horseback riding, and bicycling; or a combination of motorized uses such as dirt bikes and small and large four-wheel-drive vehicles.

SHOULDER:

The portion of the roadway contiguous to the travelway for accommodation of stopped vehicles.

SIKES ACT OF 1974:

A Federal law that promoted federal-state cooperation in managing wildlife habitats on both BLM and Forest Service lands. The act requires BLM to work with State wildlife agencies to plan the development and maintenance of wildlife habitats and has as its main tool the habitat management plan.

SMALL TRACT LANDS :

Parcels of public lands of 5 acres or less that have been found to be chiefly valuable for sale or lease as home, cabin, camp, recreational, convalescent, or business sites under the Act of June 1, 1938.

SINGLE TRACK ROUTE :

See ROAD AND ROUTE TYPES - .

SOCIAL TRAIL :

An unplanned random trail made by first visitors and then followed by others.

SOIL PRODUCTIVITY :

The capacity of a soil in its normal environment to produce a specified plant or sequence of plants under a specified system of management.

SOIL STABILITY :

A qualitative term used to describe a soil's resistance to change. Soil stability is determined by intrinsic properties such as aspect, depth, elevation, organic matter content, parent material, slope, structure, texture, and vegetation.

SOIL STRUCTURE :

The physical constitution of soil material as expressed by size, shape, and the degree of development of primary soil particles and voids into naturally or artificially formed structural units.

SPECIAL CULTURAL RESOURCE MANAGEMENT AREA (SCRMA) :

An area containing cultural resources that are of special importance for public use, scientific use, traditional use or other uses as defined in BLM Manual 8110.4.

SPECIAL LAND USE PERMIT (SLUP) :

A permit granted for purposes neither authorized nor forbidden by law.

SPECIAL RECREATION MANAGEMENT AREAS (SRMAs) :

Areas of intensive recreation use that will be managed to retain recreation opportunities while protecting other resources and reducing user conflicts. See RECREATION MANAGEMENT ZONES (RMZs) .

SPECIAL RECREATION PERMIT (SRP) :

An authorization that allows for specific nonexclusive permitted recreational uses of the public lands and related waters. SRPs are issued to control visitor use, protect recreational and natural resources, provide for the health and safety of visitors, and accommodate commercial recreational uses.

SPECIAL STATUS SPECIES :

Plant or animal species listed as threatened, endangered, candidate, or sensitive by the Federal Government or state governments.

SPLIT-ESTATE :

Land whose surface rights and mineral rights are owned by different entities.

STABILIZATION (CULTURAL RESOURCE):

Protective techniques usually applied to structures and ruins to keep them in their existing condition, prevent further deterioration, and provide structural safety without significant rebuilding. Capping mud-mortared masonry walls with concrete mortar is an example of a stabilization technique. Also see RESTORATION (CULTURAL RESOURCE) .

STABILIZATION (SOIL):

Chemical or mechanical treatment to increase or maintain the stability of a mass of soil or otherwise improve its engineering properties.

STAGING AREA:

An area where participants in an activity gather and make final preparations for the activity.

STANDARDS AND GUIDELINES FOR RANGELAND HEALTH:

See ARIZONA STANDARDS FOR RANGELAND HEALTH AND GUIDELINES FOR GRAZING ADMINISTRATION

STATE HISTORIC PRESERVATION OFFICER (SHPO):

The official within and authorized by each state at the request of the Secretary of the Interior to act as liaison for the National Historic Preservation Act. Also see NATIONAL HISTORIC PRESERVATION ACT OF 1966, AS AMENDED (NHPA) .

STATE IMPLEMENTATION PLAN (SIP):

A detailed description of the programs a state will use to carry out its responsibilities under the Clean Air Act. SIPs are collections of the regulations used by a state to reduce air pollution. The Clean Air Act requires that the Environmental Protection Agency approve each SIP.

STATE TRUST LANDS:

Lands granted to Arizona by the Federal Government at territorial establishment and at statehood. Totalling 9.4 million acres, these lands are managed by the Arizona State Land Department to yield revenue over the long term for the 14 trust beneficiaries. The chief beneficiary consists of the public schools. Whenever Arizona sells or leases these lands and their natural resources, it must pay the beneficiaries. Revenues from land sales are maintained in a permanent fund managed by the State Treasurer, and interest from this fund is paid to the beneficiaries.

STOCKING RATE :

The number of specific kinds and classes of animals grazing or using a unit of land for a specific time period. Stocking rates may be expressed as a ratio, such as of animal units/section, acres/animal unit, or acres/animal unit month.

STOCK TANK (POND) :

A water impoundment created by building a dam, digging a depression, or both, to provide water for livestock or wildlife.

STREAMBANK:

The portion of a stream channel that restricts the sideward movement of water at normal water levels. The streambank's gradient often exceeds 45 ° and exhibits a distinct break in slope from the stream bottom.

STREAMBANK STABILITY :

A streambank's relative resistance to erosion, which is measured as a percentage of alteration to streambanks.

SUBSURFACE:

Of or pertaining to rock or mineral deposits which generally are found below the ground surface.

SUCCESSION:

See PLANT SUCCESSION .

SUPPLEMENTAL FEED :

Concentrates or harvested feed that is fed to livestock to correct the deficiencies of a range diet.

SUPPLEMENTAL WILDERNESS VALUES :

Resources not required for an area to be designated a wilderness but that are considered in assessing an area's wilderness potential. Such values include ecological, geologic, and other features of scientific, educational, scenic, or historical value.

SUSTAINED YIELD :

Achieving and maintaining a permanently high level, annual or regular period production of renewable land resources without impairing the productivity of the land and its environmental values.

TAKE:

As defined by the Endangered Species Act, "...to harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect, or attempt to engage in any such conduct..."

TARGET SPECIES :

Plant species to be reduced or eliminated by a vegetation treatment. Also see VEGETATION TREATMENTS .

TERRESTRIAL SPECIES :

Ground-dwelling plants and animals.

TERTIARY ROAD :

See ROAD AND ROUTE TYPES - .

THREATENED SPECIES :

Any plant or animal species likely to become endangered within the foreseeable future throughout all or a part of its range and designated by the U.S. Fish and Wildlife Service under the Endangered Species Act. Also see ENDANGERED SPECIES .

TRAIL:

(Interagency definition) Linear route managed for human powered, stock, or off highway vehicle forms of recreation or for historic or heritage values. Trails are not generally managed for use by four wheel drive or high clearance vehicles.

TRAILHEAD:

The terminus of a hiking, horse, or bicycle trail accessible by motor vehicle and sometimes having parking, signs, a visitor register, and camping and sanitary facilities.

TREAD LIGHTLY :

A not-for-profit organization whose mission is to increase awareness of ways to enjoy the great outdoors while minimizing human impacts.

TRIALS :

Off-road competitions in which the rider has to surmount obstacles. Points are deducted if the rider puts his feet on the ground, goes outside the marked course, or fails to clear an obstacle.

UNAUTHORIZED USE :

Any use of the public lands not authorized or permitted.

USABLE FORAGE :

That portion of the forage that can be grazed without damage to the basic resources; may vary with season of use, species, and associated species.

UNGULATES:

Hoofed animals including ruminants but also horses, tapirs, elephants, rhinoceroses, and swine.

UNIQUE FARMLAND :

As defined by the Farmland Protection Policy Act of 1981, land other than prime farmland that is used for producing specific high-value food and fiber crops, as determined by the Secretary of Agriculture. Unique farmland has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruits, and vegetables. Also see PRIME FARMLAND .

UNIQUE WATER :

A water body determined by the Arizona Department of Environmental Quality as an outstanding water resource of the state because of exceptional recreational or ecological significance, such as important geology, flora, fauna, water quality, aesthetic values, or wilderness characteristics.

UPLANDS:

Lands at higher elevations than the alluvial plain or low stream terrace; all lands outside the riparian-wetland and aquatic zones.

URBAN INTERFACE (WILDLAND-URBAN INTERFACE) :

The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetation. This interface creates conflicts and complicates fighting wildfires and conducting prescribed burns, as well as all other natural resource management activities.

UTILIZATION (FORAGE) :

The proportion of the current year's forage consumed or destroyed by grazing animals. Utilization is usually expressed as a percentage.

VALID EXISTING RIGHTS :

Locatable mineral development rights that existed when the Federal Land Policy and Management Act (FLPMA) was enacted on October 21, 1976. Some areas are segregated from entry and location under the Mining Law to protect certain values or allow certain uses. Mining claims that existed as of the effective date of the segregation may still be valid if they can meet the test of discovery of a valuable mineral required under the Mining Law. Determining the validity of mining claims located on segregated lands requires BLM to conduct a valid existing rights determination.

VANDALISM (CULTURAL RESOURCE) :

Malicious damage or the unauthorized collecting, excavating, or defacing of cultural resources. Section 6 of the Archaeological Resources Protection Act states that "no person may excavate, remove, damage, or otherwise alter or deface any archaeological resource located on public lands or Indian lands...unless such activity is pursuant to a permit issued under section 4 of this Act."

VEGETATION STATES :

The different plant communities produced by an ecological site.

VEGETATION STRUCTURE :

The composition of an area's vegetation--plant species, growth forms, abundance, vegetation types, and spatial arrangement.

VEGETATION TREATMENTS :

Treatments that improve vegetation condition or production. Such treatments may include seedings; prescribed burning; or chemical, mechanical, and biological plant control.

VEGETATION TYPE :

A plant community with distinguishable characteristics.

VIEWSHED:

The entire area visible from a viewpoint.

VISITOR DAY :

12 visitor hours, which may be aggregated continuously, intermittently, or simultaneously by one or more people.

VISUAL ASPECT :

The visual first impression of vegetation at a particular time or seen from a specific point.

VISUAL RESOURCE MANAGEMENT (VRM):

The planning, design, and implementing of management objectives to provide acceptable levels of visual impacts for all BLM resource management activities.

VISUAL RESOURCE MANAGEMENT (VRM) CLASSES :

Classes with specific objectives for maintaining or enhancing scenic quality including the kinds landscape modifications that are acceptable to meet the objectives.

Class I - (Preservation) provides for natural, ecological changes only. This class includes wilderness areas, some natural areas, some wild and scenic rivers, and other similar sites where landscape modification should be restricted.

Class II - (Retention of the landscape character) includes areas where changes in any of the basic elements (form, line, color, or texture) caused by management activities should not be evident in the characteristic landscape.

Class III - (Partial retention of the landscape character) includes areas where changes in the basic elements caused by management activities may be evident in the characteristic landscape. But the changes should remain subordinate to the existing landscape character.

Class IV - (Modification of the landscape character) includes areas where changes may subordinate the original composition and character. But the changes should reflect what could be a natural occurrence in the characteristic landscape.

VOLATILE ORGANIC COMPOUNDS (VOCs) :

Carbon-containing compounds that with few exceptions evaporate into the air. Often having odors, VOCs contribute to the forming of smog and may themselves be toxic. Some examples of VOCs are gasoline, alcohol, and solvents used in paints.

WATER DEVELOPMENTS :

Construction of artificial, or modification of natural water sources to provide reliable, accessible water for livestock, wildlife, or people.

WATERSHED (CATCHMENT) :

A topographically delineated area that is drained by a stream system, that is, the total land area above some point on a stream or river that drains water past that point. The watershed is a hydrologic unit often used as a physical-biological unit and a socioeconomic-political unit for planning and managing natural resources.

WATERSHED CONDITION (WATERSHED HEALTH) :

The comparison of watershed processes to normal or expected measurements of properties such as soil cover, erosion rate, runoff rate, and groundwater table elevation; an assessment or categorization of an area by erosion conditions, erosion hazards, and the soil moisture/temperature regime.

WATERSHED FUNCTION :

The combination of processes attributed to watersheds as part of the hydrologic cycle, including interception of rain by plants, rocks, and litter; surface storage by the soil; groundwater storage; stream channel storage; soil evaporation; plant transpiration; and runoff. These processes affect the following properties of the watershed: runoff rate, water infiltration rate, soil building rate, soil erosion rate, groundwater recharge rate, groundwater discharge rate, water table elevation, and surface water discharge. These properties in turn affect plant communities through soil attributes, including soil parent material, soil moisture, and nutrients; stream and rivers through flooding duration and magnitude, as well as sediment load, which structures the dimension, pattern, and profile of channels; and lakes and reservoirs through sedimentation and nutrient input.

WAY:

See ROAD AND ROUTE TYPES - .

WEED:

Any plant that interferes with management objectives. A weed may be native or non-native, invasive or passive, or non-noxious.

WETLAND :

An area that is inundated or saturated by surface or ground water often and long enough to support and that under normal circumstances supports a prevalence of vegetation typically adapted for life in saturated soil. Wetlands include marshes, shallows, swamps, lake shores, bogs, muskegs, wet meadows, estuaries, cienegas, and riparian areas.

WILD AND SCENIC RIVER CORRIDOR :

See NATIONAL WILD AND SCENIC RIVERS SYSTEM .

WILDERNESS CHARACTERISTICS :

BLM Instruction Memorandum 2003-275 Change 1 defines Wilderness Characteristics as, "Features of the land associated with the concept of wilderness that may be considered in land use planning when BLM determines that those characteristics are reasonably present, of sufficient value (condition, uniqueness, relevance, importance) and need (trend, risk), and are practical to manage.

Naturalness. Lands and resources exhibit a high degree of naturalness when affected primarily by the forces of nature and where the imprint of human activity is substantially unnoticeable. BLM has authority to inventory, assess, and/or monitor the attributes of the lands and resources on public lands, which, taken together, are an indication of an area's naturalness. These attributes may include the presence or absence of roads and trails, fences and other improvements; the nature and extent of landscape modifications; the presence of native vegetation communities; and the connectivity of habitats.

Solitude and Primitive/Unconfined Recreation. Visitors may have outstanding opportunities for solitude, or primitive and unconfined types of recreation when the sights, sounds, and evidence of other people are rare or infrequent, where visitors can be isolated, alone or secluded from others, where the use of the area is through non-motorized, non-mechanical means, and where no or minimal developed recreation facilities are encountered."

WILDCAT ROAD :

A nonpermitted road on federally managed land.

WILDFIRE :

Any wildland fire that is not meeting management objectives and therefore requires a suppression response.

WILDLAND FIRE :

Any nonstructure fire, other than prescribed fire, that occurs in the wildland.

WILDLAND-URBAN INTERFACE (WUI) :

Areas where urban fuels directly meet natural fuels. This interface occurs mainly within 66 to 200 feet of houses, where fire most directly threatens houses and where a defensible zone can be developed.

WILDLIFE:

A broad term that includes birds, reptiles, amphibians, and nondomesticated mammals.

WILDLIFE MANAGEMENT AREAS (WMAs) :

General areas that are managed to enhance the habitat of one or more wildlife species.

WING FENCE :

Fencing extending out from a corral and serving to help funnel livestock into the corral.

WITHDRAWAL:

Withholding an area of federal land from settlement, sale, location, or entry under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area or reserving the area for a particular public purpose or program; or transferring jurisdiction over an area of federal land, other than property governed by the Federal Property and Administrative Services Act, from one department, bureau, or agency to another department, bureau, or agency. Also see SEGREGATION.

XERO-RIPARIAN :

An area in a drainage that supports plant species more characteristic of uplands than wetlands, but that is more densely vegetated than areas removed from the drainage. Any flows in these channels are characteristically ephemeral but water may also be subsurface and the drainage may not flow.

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Notes: A more extensive list of planning references is included in the Proposed RMP/Final EIS.

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Appendix A. Agua Fria National Monument Proclamation

THE WHITE HOUSE

Office of the Press Secretary (Grand Canyon, Arizona)

For Immediate Release, January 11, 2000

ESTABLISHMENT OF THE AGUA FRIA NATIONAL MONUMENT

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

The windswept, grassy mesas and formidable canyons of Agua Fria National Monument embrace an extraordinary array of scientific and historic resources. The ancient ruins within the monument, with their breathtaking vistas and spectacular petroglyphs, provide a link to the past, offering insights into the lives of the peoples who once inhabited this part of the desert Southwest. The area's architectural features and artifacts are tangible objects that can help researchers reconstruct the human past. Such objects and, more importantly, the spatial relationships among them, provide outstanding opportunities for archeologists to study the way humans interacted with one another, neighboring groups, and with the environment that sustained them in prehistoric times.

The monument contains one of the most significant systems of late prehistoric sites in the American Southwest. Between A.D. 1250 and 1450, its pueblo communities were populated by up to several thousand people. During this time, many dwelling locations in the Southwest were abandoned and groups became aggregated in a relatively small number of densely populated areas. The monument encompasses one of the best examples of these areas, containing important archeological evidence that is crucial to understanding the cultural, social, and economic processes that accompanied this period of significant change.

At least 450 prehistoric sites are known to exist within the monument and there are likely many more. There are at least four major settlements within the area, including Pueblo La Plata, Pueblo Pato, the Baby Canyon Ruin group, and the Lousy Canyon group. These consist of clusters of stone-masonry pueblos, some containing at least 100 rooms. These settlements are typically situated at the edges of steep canyons, and offer a panorama of ruins, distinctive rock art panels, and visually spectacular settings.

Many intact petroglyph sites within the monument contain rock art symbols pecked into the surfaces of boulders and cliff faces. The sites range from single designs on boulders to cliffs covered with hundreds of geometric and abstract symbols. Some of the most impressive sites are associated with major pueblos, such as Pueblo Pato.

The monument holds an extraordinary record of prehistoric agricultural features, including extensive terraces bounded by lines of rocks and other types of landscape modifications. The agricultural areas, as well as other sites, reflect the skills of ancient residents at producing and obtaining food supplies sufficient to sustain a population of several thousand people.

The monument also contains historic sites representing early Anglo-American history through the 19th century, including remnants of Basque sheep camps, historic mining features, and military activities.

In addition to its rich record of human history, the monument contains other objects of scientific interest. This expansive mosaic of semi-desert grassland, cut by ribbons of valuable riparian forest, is an outstanding biological resource. The diversity of vegetative communities, topographical features, and relative availability of water provide habitat for a wide array of sensitive wildlife species, including the lowland leopard frog, the Mexican garter snake, the common black hawk, and the desert tortoise. Other wildlife is abundant and diverse, including pronghorn, mule deer, and white-tail deer. Javelina, mountain lions, small mammals, reptiles, amphibians, fish, and neotropical migratory birds also inhabit the area. Elk and black bear are present, but less abundant. Four species of native fish, including the longfin dace, the Gila mountain sucker, the Gila chub, and the speckled dace, exist in the Agua Fria River and its tributaries.

Section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431) authorizes the President, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and to reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected.

WHEREAS it appears that it would be in the public interest to reserve such lands as a national monument to be known as the Agua Fria National Monument:

NOW, THEREFORE, I, WILLIAM J. CLINTON, President of the United States of America, by the authority vested in me by section 2 of the Act of June 8, 1906 (34 Stat. 225, 16 U.S.C. 431), do proclaim that there are hereby set apart and reserved as the Agua Fria National Monument, for the purpose of protecting the objects identified above, all lands and interests in lands owned or controlled by the United States within the boundaries of the area described on the map entitled "Agua Fria National Monument" attached to and forming a part of this proclamation. The Federal land and interests in land reserved consist of approximately 71,100 acres, which is the smallest area compatible with the proper care and management of the objects to be protected.

For the purpose of protecting the objects identified above, all motorized and mechanized vehicle use off road will be prohibited, except for emergency or authorized administrative purposes.

Nothing in this proclamation shall be deemed to enlarge or diminish the jurisdiction of the State of Arizona with respect to fish and wildlife management.

The establishment of this monument is subject to valid existing rights.

All Federal lands and interests in lands within the boundaries of this monument are hereby appropriated and withdrawn from all forms of entry, location, selection, sale, leasing, or other disposition under the public land laws, including but not limited to withdrawal from location, entry, and patent under the mining laws, and from disposition under all laws relating to mineral and geothermal leasing, other than by exchange that furthers the protective purposes of the monument. Lands and interests in lands within the proposed monument not owned by the United

States shall be reserved as a part of the monument upon acquisition of title thereto by the United States.

There is hereby reserved, as of the date of this proclamation and subject to valid existing rights, a quantity of water sufficient to fulfill the purposes for which this monument is established. Nothing in this reservation shall be construed as a relinquishment or reduction of any water use or rights reserved or appropriated by the United States on or before the date of this proclamation.

The Secretary of the Interior shall manage the monument through the Bureau of Land Management, pursuant to applicable legal authorities, to implement the purposes of this proclamation.

Laws, regulations, and policies followed by the Bureau of Land Management in issuing and administering grazing leases on all lands under its jurisdiction shall continue to apply with regard to the lands in the monument.

Nothing in this proclamation shall be deemed to revoke any existing withdrawal, reservation, or appropriation; however, the national monument shall be the dominant reservation.

Warning is hereby given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

IN WITNESS WHEREOF, I have hereunto set my hand this eleventh day of January, in the year of our Lord two thousand, and of the Independence of the United States of America the two hundred and twenty-fourth.

WILLIAM J. CLINTON

Appendix B. Administrative Actions and Standard Operating Procedures

This appendix includes Administrative Actions and Standard Operating Procedures by program area. The information that follows pertains to BLM-administered public lands in the Agua Fria National Monument (AFNM). The BLM will maintain the practices, procedures, and policies listed below.

Administrative Actions are neither land use plan decisions nor implementation-level management decisions. Instead, these are day-to-day non-ground disturbing activities and are an important component when considering program activities. These activities are often required by FLPMA but do not require NEPA analysis or a written decision by a responsible official to be accomplished. Examples include mapping, surveying, inventorying, monitoring, and collecting needed information needed such as research and studies.

Standard Operating Procedures are based on laws, regulations, executive orders, BLM planning manuals, policies, instruction memoranda, and applicable planning documents.

B.1. Air Quality

B.1.1. Standard Operating Procedures

The Clean Air Act of 1970 and the 1990 amendments govern air quality. The objective of the AFNM air resource program is to maintain and/or improve air quality as established by the National Ambient Air Quality Standards, achieve State Implementation Plan goals for non-attainment areas, and reduce emissions from point/non-point sources. Within Arizona, air quality is regulated as follows:

Open Areas, Dry Washes, and Riverbeds: The control of airborne dust from open areas, dry washes, and river beds is addressed in Arizona Rules and Regulations for Air Pollution Control, R9-3-404 A-C, as amended.

Roadways and Streets: Regulation R9-3-405 A prohibits the use, repair, building, or rebuilding of roadways without taking reasonable dust abatement measures.

Fire Management: Regulations R9-3-402 and 403 direct BLM to follow permitting procedures before conducting any prescribed burning projects, to ensure that smoke from fires does not degrade air quality. Section 118 of the Clean Air Act (49.501 of the Arizona Laws Relating to Environmental Quality) charges ADEQ to protect the health and welfare of Arizona residents from adverse impacts of air pollution. Those wishing to conduct prescribed burns must contact ADEQ.

B.2. Biological Resources

B.2.1. Administrative Actions

Special Status Species Management

- Comply with Section 7 (a) of the Endangered Species Act by carrying out positive actions promoting the recovery of listed and proposed populations, and by assuring that BLM actions do not jeopardize the continued existence of threatened and endangered species.
- Cooperate with other agencies to actively manage, protect, and/or improve special status species habitat to maintain and/or increase populations to achieve common goals and objectives. Wildlife habitat, both aquatic and terrestrial, will be managed in cooperation with the state and federal wildlife agencies and other interested parties to conserve or improve the habitat of all sensitive and native species.
- Participate with other agencies in recovery, conservation, research, management, monitoring, and educational activities relating to special status species.
- Acquisition of non-federal lands will be prioritized based on the potential to enhance the conservation and management of threatened or endangered species habitat, riparian habitat, desert tortoise habitat, key big game habitat, or the overall manageability of wildlife habitat.
- Coordinate with the Southwestern Bald Eagle Management Committee to support implementation of the guidelines set forth in the Arizona Conservation Assessment and Strategy Plan for the bald eagle in Arizona.
- Continue to support federal and state agencies efforts to protect and enhance bald eagle breeding areas.

Administrative Actions - Desert Tortoise

- Desert tortoise habitat will be compensated in accordance with the Management Plan for the Sonoran Desert Population of the Desert Tortoise in Arizona 1996 and subsequent updates.
- When possible employ a precautionary principle in desert tortoise habitat management using the best available information until site-specific research can be conducted.
- Avoid impacts on individual tortoise and their burrows.
- Maintain and develop a proactive public education program on the desert tortoise and its habitat requirements, including participation in public events with tortoise habitat information. Update the existing tortoise brochure every five years or as needed.
- Assure that all personnel working within desert tortoise habitat on public lands are knowledgeable about tortoises and their habitat and are trained in appropriate procedures when they encounter tortoises.

Administrative Actions - Gila Topminnow, Gila Chub, and Desert Pupfish

- In coordination with the Arizona Game and Fish Department, monitor all Gila topminnow, Gila chub, and desert pupfish populations annually.
- Monitor for mortality of Gila topminnow, Gila chub, and desert pupfish populations following significant runoff events within a year of treating the watershed with prescribed burns.
- All monitoring results will be shared with the U.S. Fish and Wildlife Service annually.
- BLM will coordinate all fire suppression actions in watersheds occupied by Gila topminnow, Gila chub, and desert topminnow with the U.S. Fish and Wildlife Service (FWS). If incidental take of these species is likely to occur due to suppression actions, BLM will cooperate with appropriate agencies to collect and salvage fish, if collection and salvage operations can be accomplished safely. BLM will renovate/restore the population site(s) and aid in the re-establishment of the species into the original site(s). If repatriation is not possible due to extreme effects at the site, BLM will coordinate with the FWS to locate or restore a substitute site. Once conditions are suitable for the fish or a substitute site has been selected, the salvaged fish shall be reintroduced. BLM shall coordinate the salvage and release with the FWS and AGFD .

- The BLM will monitor the effects of fire suppression actions on Gila topminnow, Gila chub, and desert pupfish using approved protocols. Where fire suppression actions may have resulted in fish mortality, the BLM will investigate fire suppression related fish mortality and determine if there have been measurable reductions in abundance from that previously determined by status reviews. The BLM will monitor post-fire levels of sediment, debris, and fire-fighting chemicals and water quality at Gila topminnow, Gila chub, and desert pupfish sites to ensure the habitat remains capable of supporting these fish. Water quality data will include temperature, pH (acidity), dissolved oxygen, total dissolved solids, and turbidity. This monitoring will occur as soon as practicable after the fire and will be coordinated with FWS.
- BLM will provide a brief report of monitoring results to the FWS by February of each year following monitoring efforts along with the Wildfire Suppression Documentation forms which will contain the data agreed upon (see FWS File # 02-21-03-F-0210).
- The following actions are applicable to Silver Creek and Indian Creek:
 - Monitor stream bank alteration and vegetation two times annually, during and following livestock seasonal use period.
 - Monitor functional condition and trend every 3 years.

Fish and Wildlife Habitat Management

- Initiate, collaborate, and/or support projects related to conservation measures set forth in the following plans: the Migratory Bird Executive Order 13186, Arizona Partners in Flight Bird Conservation Plan, Partners in Flight Desert and Riparian Bird Conservation Plans, and USFWS North American Waterfowl Management Plan.
- Continue to cooperate with the Sonoran Audubon Society, Arizona Audubon, and other organizations in conducting survey, documentation, and monitoring activities for bird species within the Agua Fria Important Bird Area.
- Through cooperative partnerships with AGFD and other State and private entities, BLM will conserve, enhance, and restore wildlife habitats, including natural springs, wetlands, and streams. Wildlife habitat improvement projects will be implemented where necessary to stabilize or improve unsatisfactory or declining wildlife habitat condition.
- Continue to implement wildlife habitat management through Habitat Management Plans, developed in cooperation with AGFD to meet the requirements of the Sikes Act and address site-specific habitat management objectives. Existing HMPs will be used until new plans are developed.
- Identify and reduce adverse impacts to natural plant and animal communities associated with invasive species. Efforts to control or eradicate invasive wildlife species will be carried out in cooperation and collaboration with AGFD .
- BLM will provide a brief report of monitoring results to the FWS by February of each year following monitoring efforts along with the Wildfire Suppression Documentation forms which will contain the data agreed upon (see FWS File # 02-21-03-F-0210).
- Following guidance in BLM's Handbook H-1741, construction and modification of fences to meet fence standards will include coordination with livestock operators, interested conservation organizations, and other Federal, State, or local governments as appropriate.
- Establish collaborative research partnerships with academic institutions, professional and non-profit organizations, and other governmental entities.
- Provide opportunities for training and utilization of volunteers.

Vegetation and Riparian Management

- The BLM will cooperate on a landscape basis with other authorities to educate the community to the risks to the environment from invasive and noxious species. In cooperation with other authorities, the BLM will research the means of control, monitor the resources affected, and implement control actions when needed.
- A monitoring, management, and educational program will be established to reduce the spread of plants classified as invasive by the U.S. Department of Agriculture (USDA).
- To help stop the spread of invasive or noxious weeds, the BLM will provide educational material to equestrian users on the use of certified weed-free hay, straw, pellets, hay cubes, and processed grains.

B.2.2. Standard Operating Procedures

The AFNM provides unique habitat for federally listed and special status species. This diversity of habitats also supports a wide variety of more common game and non-game wildlife species. The BLM's Fundamentals of Rangeland Health (43 CFR 4180) addresses habitats that have been restored or may make significant progress towards restoration, as well as those that are actively being maintained for federally listed threatened, endangered, proposed, and candidate species, and other special status species. The BLM Arizona's Standards for Rangeland Health include provisions for ensuring that productive and diverse upland and wetland plant communities of native species exist and are maintained.

Special Status Species Management

No activities or projects that would jeopardize the continued existence of federally listed threatened or endangered plant or wildlife species, or species proposed for listing, will be permitted on BLM-administered lands.

The Endangered Species Act (ESA) of 1973, as amended, provides for the protection of threatened, endangered and proposed threatened or endangered species of plants and animals.

The following requirements are prescribed in the BLM's Manual 6840:

1. The BLM shall conserve T/E species and the ecosystems upon which they depend and shall use existing authority in furtherance of the purposes of the ESA. Specifically the BLM shall:
 - a. Determine, to the extent practical, the occurrence and distribution of all T/E species on lands administered by BLM, and evaluate the significance of lands administered by BLM in the conservation of those species.
 - b. Identify land administered by BLM that is essential habitat and designated Critical Habitat of T/E species, and prescribe management for the conservation of these habitats in land use plans.
 - c. Develop and implement management plans that will ensure the conservation of T/E species and their habitats.
 - d. Evaluate ongoing management activities to ensure T/E species conservation objectives are being met.
 - e. Ensure that all activities affecting the populations and habitats of T/E species are designed to be consistent with recovery needs and objectives.
2. The BLM shall ensure that all actions authorized, funded, or carried out by the BLM are in compliance with the ESA. To accomplish this, the BLM shall:

- a. Screen all proposed actions to determine if T/E species or their habitat may be affected. Normally the environmental analysis process is used.
 - b. Initiate consultation with the FWS/NMFS, as appropriate, for those actions that may affect T/E species or their habitats.
 - c. Not carry out any actions that would cause any irreversible or irretrievable commitment of resources or reduce the future management options for the species involved until the consultation proceedings are completed and a final decision has been reached.
 - d. Ensure that no BLM action will adversely affect the likelihood of recovery of any T/E species.
3. The BLM shall cooperate with the FWS/NMFS in planning and providing for the recovery of T/E species. To accomplish this BLM shall: a. Participate on recovery teams and in recovery plan preparation, as well as State or regional working teams responsible for T/E species recovery. b. Review technical and agency review drafts of recovery plans for species affected by BLM management to ensure that proposed actions assigned to BLM are technically and administratively feasible and consistent with BLM's mission and authority. c. Ensure that the decisions, terms, and conditions of Resource Management Plans, and more detailed site-specific plans, prepared for lands covered by previously approved recovery plans are consistent with meeting recovery plan objectives.
 4. The BLM shall retain in Federal ownership all habitats essential for the survival or recovery of any T/E species, including habitat used historically by these species.
 5. Species proposed for listing as T/E and proposed Critical Habitat shall be managed with the same level of protection provided for T/E species except that formal consultations are not required. The BLM shall confer with the FWS/NMFS on any action that will adversely affect a proposed species or proposed critical habitat.
 6. Candidate species will be managed so as not to contribute to the need for them to become listed as threatened or endangered.

Fish and Wildlife Habitat Management

The State of Arizona establishes regulations and enforcement concerning fish and wildlife on all lands administered by the BLM. Nothing will be construed as affecting the jurisdiction or associated responsibilities of the AGFD . Hunting and trapping are allowable activities on these lands.

This BLM is responsible for managing wildlife habitat, while AGFD , through the authority of the Arizona Game and Fish Commission, has public trust responsibility to manage fish and wildlife. The BLM has a Master Memorandum of Understanding (MOU) with the AGFD which establishes protocols that direct the cooperative working relationship between the agencies. The MOU provides context to better enable both agencies to work in partnership and to make decisions in a consistent manner across the state. The guidelines established in the MOU apply to implementation of this RMP.

Any permit system or restriction of use or access would include coordination with other state and federal entities that issue use permits on federal lands to assure that authorized permittees have fair and reasonable access to their permitted activity. For example, should a permit system be implemented, the BLM will coordinate with AGFD to enable coordination of access for hunters with valid hunting licenses and permits for the affected hunting unit. Coordination with AGFD during development of habitat management plans and enhancement of wildlife habitat, species

diversity, riparian health, and other activities to achieve the optimum health of wildlife species and populations will continue. Administrative access will be allowed for AGFD staff for law enforcement, natural resource management, and other purposes.

The BLM will conserve, enhance, and restore wildlife habitats, including conservation of natural springs, wetlands, and streams through cooperative partnerships with the AGFD, Tonto National Forest, Prescott National Forest, Yavapai County, and other governmental and private entities.

The BLM will coordinate and cooperate with federal and state agencies, along with partners, to assess the need to maintain, improve, and/or adjust the density or distribution of wildlife waters throughout the planning area to maintain the presence of water for wildlife populations across their range.

The development of springs and seeps, or other projects affecting water and associated resources, will be designed to protect ecological functions and processes and to continue to provide habitat at the source for endemic invertebrates that may be present.

Water developments for purposes other than wildlife will include design features that will ensure safe and continued access to water by wildlife.

On BLM-managed lands, the Animal and Plant Health Inspection Service—Wildlife Services (APHIS-WS) and the AGFD manage animal damage control, predator management, control of exotic wildlife species, and feral, non-permitted livestock on BLM-managed lands. A 1995 MOU recognizes the legal authority of APHIS-WS to conduct wildlife damage management on BLM-managed lands. The BLM acknowledges that authority and will continue close coordination with APHIS-WS and AGFD, as well as the State Land Department, State Brand Inspector, and other affected agencies on animal damage control efforts within the AFNM.

Vegetation and Riparian Management

- Impacts to vegetation from construction, recreation, and other activities will be avoided or mitigated. Where successful restoration is feasible, vegetative rehabilitation with suitable seed mix or root stock will follow.
- The removal of cacti or other plants may be approved by the BLM if needed to maintain the safe operation of existing utility lines.
- The use and perpetuation of native plant species will be emphasized. However, when restoring or rehabilitating disturbed or degraded rangelands, non-intrusive, non-native plant species are appropriate for use where native species: (a) are not available, (b) are not economically feasible, (c) cannot achieve ecological objectives as well as non-native species, and/or (d) cannot compete with already established non-native species.

Vegetation Treatment

Standard operating procedures and treatment methods will be used to achieve desired future conditions for vegetation management. BLM policies and guidance for public land treatments will be followed in implementing all treatment methods. Many guidelines are provided in BLM Handbook H-1740-1, Renewable Resource Improvement and Treatment Guidelines and Procedures (1987); in BLM Arizona's Standards for Rangeland Health and Guidelines for Grazing Administration (1997); in programmatic documents such as BLM's Environmental Impact Statement for Vegetation Treatments, Watersheds and Wildlife Habitats on Public Lands

Administered by the BLM in the Western United States, Including Alaska (1991), and “Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States: Programmatic Environmental Impact Statement,” (BLM 2007), and in other general and specific program policy, procedures, and standards pertinent to implementation of renewable resource improvements. The standard approaches to manual, chemical, mechanical, biological, and fire treatment methods are described in detail below. The specific methods applied would depend on area-specific management objectives with an assessment of environmental impacts.

Manual Vegetation Treatment

Hand-operated power tools and hand tools are used to cut, clear, or prune herbaceous and woody plants. In manual treatments workers do the following:

- cut plants above ground level,
- pull, grub, or dig out plant root systems to prevent later sprouting and regrowth,
- scalp at ground level or remove competing plants around desired vegetation, and
- place mulch around desired vegetation to limit the growth of competing vegetation.

Hand tools such as the handsaw, axe, shovel, rake, machete, grubbing hoe, mattock (combination of axe and grubbing hoe), brush hook, and hand clippers are used in manual treatments. Axes, shovels, grubbing hoes, and mattocks can dig up and cut below the surface to remove the main roots of plants such as prickly pear and mesquite that have roots that can quickly resprout in response to surface cutting or clearing. Workers also may use power tools such as chainsaws and power brush saws.

Although manual vegetation treatment is labor intensive and costly, compared to prescribed burning or herbicide application, it can be extremely species selective and can be used in areas of sensitive habitats or areas that are inaccessible to ground vehicles. Manual treatment of undesired plants would be used on sites where fire (prescribed or naturally ignited) is undesirable or where significant constraints prevent widespread use of fire as a management tool. These sites comprise a range of vegetation communities or habitat types. They include areas where there may be wildlife concerns, yet it is deemed beneficial to remove trees, shrubs, or other fuel-loading vegetation. Manual vegetation treatments cause less ground disturbance and generally remove less vegetation than prescribed fire or mechanical treatments.

Mechanical Vegetation Treatment

Mechanical vegetation treatments employ several different types of equipment to suppress, inhibit, or control herbaceous and woody vegetation. The goal of mechanical treatments is to kill or reduce the cover of undesirable vegetation and thus encourage the growth of desirable plants. BLM uses wheeled tractors, crawler-type tractors, mowers, or specially designed vehicles with attached implements for mechanical vegetation treatments. Mechanical equipment is used to reduce fuel hazards in accordance with BLM established procedures. Re-seeding after mechanical treatments is important to help ensure that desirable plants and not weedy species will become established on the site. Mechanical treatment and reseedling should occur at a time to best control the undesirable vegetation and encourage the establishing of desirable vegetation. The best mechanical method for treating undesired plants in a particular location depends on the following factors:

- characteristics of the undesired species present, such as plant density stem size, woodiness, brittleness, and resprouting ability,
- need for seedbed preparation, revegetation, and improved water infiltration rates,
- topography and terrain,

- soil characteristics such as type, depth, amount and size of rocks, erosion potential, and susceptibility to compaction,
- climatic and seasonal conditions, and
- potential cost of improvement as compared to expected results.

Bulldozing consists of a wheeled or crawler tractor with a heavy hydraulic controlled blade. Bulldozers push over and uproot vegetation and leave it in windrows or piles. Bulldozing is best adapted to removing scattered stands of large brush or trees. Several different kinds of blades can be used, depending of the type of vegetation and goals of the project. The disadvantage of bulldozing is that it disturbs soil and may damage non-target plants.

Disk plowing in its various forms can be used for removing shallow-rooted herbaceous and woody plants. Disk plows should only be used where all of the vegetation is intended to be killed. Several different kinds of root plows are specific for certain types of vegetation. In addition to killing vegetation, disk plowing loosens the soil surface to prepare it for seeding and to improve the rate of water infiltration. The disadvantage of disk plowing is that it may be expensive and usually kills all species. Also, plowing is usually not practicable on steep slopes (> 35-45 percent slope) or rocky soil. Plant species that sprout from roots may survive.

Vegetation is chained and cabled by dragging heavy anchor chains or steel cables hooked to tractors in a U-shape, half circle, or J-shaped manner. Effective on rocky soils and steep slopes, chaining and cabling are best used to control non-sprouting woody vegetation such as small trees and shrubs. Desirable shrubs may be damaged in the process. This control method normally does not injure herbaceous vegetation. It is cost effective because it can readily treat large areas. The chains or cables also scarify the soil surface in anticipation of seeding desirable species. The disadvantage is that weedy herbaceous vegetation can survive this treatment.

Various tractor attachments are used for mowing, beating, crushing, chopping, or shredding vegetation, depending on the nature of the plant stand and goals of the project. The advantage in using this type of equipment is that selective plants may be targeted to achieve specific goals. For example, mowing is effective in reducing plant height to a desirable condition, and mowing usually does not kill vegetation. Mowing is more effective on herbaceous than woody vegetation. On the other hand, a rolling cutter leaves herbaceous vegetation but can kill woody nonsprouting vegetation by breaking stems at ground level. Mowing, beating, crushing, chopping, or shredding usually do not disturb soil. Rocky soil and steep slopes may limit the use of this equipment.

Debris management after a mechanical treatment is critical in fuels reduction projects. Vegetation material that is left on a site will dry and may become more hazardous than before the treatment. Herbaceous material is usually not a problem because it will decompose relatively fast, depending on soil moisture, ambient humidity, and temperature. Woody vegetation should be piled and burned under acceptable fire management practices.

Biological Vegetation Treatment

Biological methods of vegetation treatment employ living organisms to selectively suppress, inhibit, or control herbaceous and woody vegetation. This method is viewed as one of the more natural processes because it requires the proper management and plant-eating organisms, and precludes the use of mechanical devices, chemical treatments, or burning.

The use of biological control agents will be conducted in accordance with procedures in BLM Manual 9014, Use of Biological Control Agents of Pests on Public Lands (BLM 1990b). Insects,

pathogens, and grazing by cattle, sheep, or goats would be used as biological control methods under all Alternatives, but these methods can control only a few plant species. Insects are the main natural enemies now being used. Other natural enemies include mites, nematodes, and pathogens. This treatment method will not eradicate the target plant species but merely reduces the target plant densities to more tolerable levels. This method also reduces competition with the desired plant species for space, water, and nutrients. This treatment method will be used on larger sites where the target plant has become established and is strongly competitive. Gradually, biological methods using cattle, sheep, or goats would avoid erosion hazard areas, areas of compactable soils, riparian areas susceptible to bank damage, and steep erodible slopes.

Biological control using cattle, sheep, or goats would be applied to treatment areas for short periods. In using grazing animals as effective biological control measures, several factors will be considered:

- target plant species present,
- size of the infestation of target plant species,
- other plant species present,
- stage of growth of both target and other plant species,
- palatability of all plant species present,
- selectivity of all plant species present by the grazing animal being considered for use,
- availability of that grazing animal within the treatment site area,
- type of management program that is logical and realistic for the treatment site, and
- potential impacts to native wildlife and their habitat.

These factors will be some of the options taken when developing the treatment for a site.

Cattle, sheep, and goats can be used to control the top growth of certain noxious weeds. The following are some advantages of using livestock, mainly sheep or goats, for noxious weed control:

- They use weeds as a food source;
- After a brief adjustment period, they sometimes consume as much as 50% of their daily diet of certain noxious weed species;
- Average daily gains of offspring grazing certain weed-infested pastures can sometimes be significantly higher than average daily gains of offspring grazing grass pastures; and
- Sheep or goats can be used in combination with herbicides.

Following are some of the disadvantages of using livestock:

- They also use non-target plants as food sources;
- The use of domestic animals, like sheep or goats, may require a herder or temporary fencing;
- The animals may be killed by predators such as coyotes;
- Heavy grazing of some weed species, such as leafy spurge, tends to loosen the stool of grazing animals;
- Most weed species are less palatable than desirable vegetation, and overgrazing would result;
- Livestock may accelerate movement of non-native plants by ingesting and excreting seeds; and
- Livestock may transmit parasites or pathogens to resident native wildlife species.

Particular insects, pathogens, or combinations of these biological control agents may also be introduced into an area of competing or undesired vegetation to selectively feed upon or infect target plants and eventually reduce their density within that area. Only on rare occasions will one biological control agent reduce the target plant density to the desired level of control. Therefore, a complex of biological control agents is most often needed to reduce the target plant density

to a desirable level. Even with a complex of biological control agents, often 15 to 20 years are needed to bring about an economic control level, especially on creeping perennials. In most circumstances, biological control agents are not performing control. They are only creating stresses on weeds, which is not the same as control.

Some advantages of using natural enemies to control weeds are as follows:

- They are self-perpetuating;
- They can be comparatively economical once studied and established;
- They can be highly selective;
- They offer a high degree of environmental safety; and
- They do not require fossil fuel energy.

Biological control does have the following limitations:

- It is a slow process;
- It does not achieve eradication but merely reduces weed densities to more tolerable levels;
- It is highly selective, attacking one weed existing among a complex of other weeds;
- It cannot be used against weeds that are valued in some situations because insects or pathogens do not recognize boundaries;
- It cannot be used against weeds that are closely related to beneficial plants because the insects or pathogens may be unable to discriminate between related plant species; and
- It cannot be used against weeds when the biological control agent requires an alternate host that may be a beneficial plant.

To develop a biological weed control program, the following steps must be taken:

1. Identify weed species and determine origin.
2. Determine if any natural enemies occur at the point of origin.
3. If possible, collect natural enemies.
4. Hold preliminary screening trials on the natural enemies of the weed in the United States.
5. Hold further screening trials in the United States.
6. Raise biological control agents before the first release.
7. Release biological control agents for the first time onto selected sites.
8. If biological control agents survive and increase in numbers, collect agents and release onto other sites of weed infestation.

Usually a complex of at least three to five different biological agents, such as insects, must be used to attack a weed infestation site. Even with a complex of biological agents, often 15 to 20 years are needed to bring about an economic control level, especially on creeping perennial plants.

Chemical Vegetation Treatment

Chemical treatment would be used to control unwanted vegetation, and in some instances would be followed by a prescribed burn. Treatments would be conducted in accordance with BLM procedures and would meet or exceed individual State label standards. The chemicals can be applied by many different methods, and the selected technique depends on several variables, including the following:

- treatment objective (removal or reduction),
- accessibility, topography, and size of the treatment area,
- characteristics of the target species and the desired vegetation,
- the location of sensitive areas in the immediate vicinity (potential environmental impacts),
- expected costs and equipment limitations, and

- meteorological and vegetation conditions of the treatment area at the time of treatment.

Herbicide applications are scheduled and designed to minimize potential impacts on nontarget plants and animals, while remaining consistent with the objective of the vegetation treatment program. The rates of application depend on the target species, presence and condition of nontarget vegetation, soil type, depth to the water table, presence of other water sources, and the requirements of the label.

Often the type, schedule, and rate of application of the chosen herbicide may differ from the most ideal application for maximum control of the target plant species. Application procedures may need to be adjusted to minimize damage to other plant species or to ensure minimum risk to human health and safety.

The chemicals would be applied aerially with helicopters or fixed-wing aircraft or on the ground using vehicles or manual application devices. Helicopters are more expensive to use than fixed-wing aircraft. They are more maneuverable and effective in areas with irregular terrain and in treating specific target vegetation in areas with many vegetation types. Manual applications are used only for treating small areas or areas inaccessible by vehicle. The typical and maximum application rates of each chemical would vary, depending on the program area being treated.

Prescribed Burning

Prescribed burning is the planned application of fire to wildland fuels in their natural or modified state, under specific conditions of fuels, weather, and other variables, to allow the fire to remain in a predetermined area and to achieve site-specific fire and resource management objectives.

Management objectives of prescribed burning include the following:

- controlling of certain species,
- enhancing growth, reproduction, or vigor of certain species,
- managing fuel loads, and
- maintaining vegetation community types that best meet multiple use management objectives.

Treatments would be implemented in accordance with BLM's procedures in Prescribed Fire Management (BLM 2000c).

Before conducting a prescribed burn, a written plan must be prepared. The plan must:

- consider existing conditions (amount of fuel, fuel moisture, temperatures, terrain, weather forecasts), and
- name the people responsible for overseeing the fire.

Also, natural fire that is allowed to burn needs to be carefully monitored to ensure that it will not threaten communities, ecosystems, and other values to be protected. This monitoring may require special expertise such as fire-use management teams that support the overall fire management program. Planning and implementation for a specific prescribed fire project entails the following four phases:

Phase One: Information/assessment includes the following:

- determining the area to be treated,
- inventorying and assessing site-specific conditions (live and dead vegetation densities, dead and down woody fuel loadings, soil types),
- analyzing historic and present fire management,

- identifying resource objectives from land use plans, and
- conducting NEPA analysis and compliance.

Phase Two: Prescribed fire plan development includes the following:

- developing the site-specific prescribed fire plan to BLM's standards,
- reviewing the plan, and
- obtaining plan approval from local BLM's field office administrators.

Phase Three: Implementation includes the following:

- preparing the prescribed fire boundary to ensure that the fire remains within prescribed boundaries,
- preparing the site, which may include building firelines, and improving vehicle routes and wildlife and stock trails by limbing trees and clearing debris, and
- igniting the fire according to the plan's prescribed parameters.

Phase Four: Monitoring and evaluation includes assessment and long-term monitoring of the fire treatment to ensure that the prescribed fire has met the objectives of the approved prescribed fire plan.

B.3. Cultural Resources

B.3.1. Administrative Actions

- Continue to regularly communicate with the State Historic Preservation Office to share information and obtain technical advice on issues relating to compliance with Sections 106 and 110 of NHPA, in accordance with the Arizona State Protocol.
- Continue to consult with the Yavapai Prescott Indian Tribe, the Salt River Pima-Maricopa Indian Community, the Gila River Indian Community, the Hopi Tribe, and other interested Indian tribes to identify places of traditional importance and associated access needs. Develop measures for management and protection of such places that may be identified by tribes during the life of the Approved RMP.
- Identify sacred areas in consultation with Indian tribes and, where practicable, limit land uses to those that do not conflict with ascribed values.
- Honor tribal requests to protect the confidentiality of sensitive information to the extent permitted by law.
- Provide opportunities for participation by Indian tribes in research and interpretation.
- Specific management prescriptions for sites allocated to Traditional Use will be developed in consultation with the Indian tribes to which they are culturally important.
- Restrict public information about the specific locations of sites that are not allocated to Public Use (selected for interpretive and educational uses).
- Coordinate with the Tonto National Forest, state government, tribes, and other governmental entities (under existing agreements and any new arrangements deemed necessary) to disseminate and exchange information and cooperate in management actions consistent with applicable legal authorities and other directives.
- Complete Class II (sample) and Class III (intensive) field inventories to identify cultural resources and evaluate the condition of sites, in accordance with Section 110 of NHPA. Use the information obtained through these archaeological surveys to allocate sites to appropriate use categories, develop protection measures, and integrate survey results into research designs and interpretation efforts.

- Inventory priorities in the AFNM are identified as follows:
 - Conduct field inventories to identify significant resources in the areas north of Perry Mesa.
 - Complete a Class III survey of 500 acres at the north end of Black Mesa. This will complete a 100 percent level of inventory coverage of Black Mesa north of Sunset Canyon.
 - Complete Class III surveys of corridors at least 200-feet wide along 20 miles of Bloody Basin Road, Forest Road 14, and other major designated routes on Perry Mesa.
 - Conduct Class III surveys of corridors at least 1/4 mile wide totaling 12 miles along the Agua Fria River, Silver Creek, Sycamore Creek, Indian Creek, and Ash Creek.
 - Complete Class III surveys of at least 2,000 acres in areas surrounding Pueblo la Plata, Baby Canyon Pueblo, and Pueblo Pato.
- Complete documentary research and oral histories to gain a better understanding of cultural resources associated with homesteading, mining, ranching, and other historical period activities.
- Establish collaborative research partnerships with academic institutions, professional and non-profit organizations, and avocational organizations.
- Provide opportunities for training and participation in site documentation, research, protection, and educational projects by students and volunteers. Ensure adequate professional oversight of work conducted by students and volunteers.
- Coordinate with tribes and Tonto National Forest to prepare an ethno-historical study of the history of Native American uses and heritage values in the Perry Mesa National Register District.
- Continue support of the Arizona Site Steward Program.
- Continue to regularly monitor at least 15 pueblo villages and rock art sites that are at greatest risk from vandalism, with help from partners including volunteers from the Arizona Site Steward Program. Develop and implement systematic monitoring protocols for selected sites.
- Focus monitoring on rock art sites and habitation sites with 20 or more rooms, particularly sites within 1/2 mile of travel routes. This strategy conforms to the results of a vandalism study completed in 1992 by BLM and Tonto National Forest.
- Continue to participate in Arizona Archaeology Awareness Month and other educational outreach efforts that highlight the values of cultural heritage resources and the need to protect these resources.
- Develop and maintain an active program of public education on the scientific and heritage values of the monument's cultural resources and the need to preserve them. Assist BLM's National Heritage Education Program and its partner organizations in pursuing and implementing grants to produce educational materials.
- Require that holders of special recreation permits provide site visitors with appropriate educational information on archaeological site etiquette and resource conservation.
- Complete interpretive plans for sites allocated to Public Use through interpretive development.
- Conduct mapping and site documentation prior to interpretive development or use for commercial tours to the extent needed to preserve archaeological data, plan for interpretive facilities, and provide a baseline condition assessment for monitoring changes associated with visitor use.
- Implement procedures for systematic monitoring of all sites developed or authorized for public visitation. If needed, restrict visitor access or group tours to prevent damage from visitor use.
- The BLM will develop Cultural Resource Project Plans for protection or interpretation projects that require precise descriptions of implementation procedures, workforce, scheduling, equipment, and supplies. Project planning will be implemented following guidance in BLM's Manual 8130, *Planning for Uses of Cultural Resources*.

B.4. Standard Operating Procedures

- Ensure that all undertakings are reviewed and conducted in compliance with Section 106 of NHPA, the Archaeological Resources Protection Act, the Native American Graves Protection and Repatriation Act, and other applicable laws.
- Reviews of proposed activities and authorizations will include records searches and field inventories, at the appropriate levels of intensity defined in BLM's Manual 8110, *Identifying and Evaluating Cultural Resources*.
- Land use authorizations (for example, maintenance of utility facilities authorized under valid existing rights) will include stipulations requiring users/operators to cease work and notify the BLM in the event of a discovery of cultural resources.

B.5. Fire Management

B.5.1. Standard Operating Procedures

The appropriate management response concept represents a range of available management responses to wildland fires. Responses range from full fire suppression to managing fires for resource benefits (fire use). Management responses applied to a fire will be identified in the fire management plan and will be based on objectives derived from the area's land use allocation, as determined in the *Arizona Statewide Land Use Plan Amendment for Fire, Fuels and Air Quality Management* (BLM 2004); relative risk to resources, the public, and firefighters; potential complexity; and the ability to defend management boundaries. Any wildland fire can be aggressively suppressed and any fire that occurs in an area designated for fire use can be managed for resource benefits if it meets the prescribed criteria from an approved fire management plan.

Fire suppression will be carried out in a manner consistent with Interagency Standards for Fire and Aviation Operations, which is updated on an annual basis by the National Interagency Fire Center. Logistical support, operation and coordination, and policies and procedures for mobilization of fire fighting resources are outlined in the Southwest Area Mobilization Guide. This guide provides direction for Federal and State agencies Arizona, New Mexico and Texas.

The following constraints to fire suppression actions are applicable:

- Use suppression tactics that limit damage or disturbance to the habitat and landscape. Use no heavy equipment (such as dozers) unless approved.
- Use fire retardants or chemicals next to waterways in accordance with the Environmental Guidelines for Delivery of Retardant or Foam near Waterways (Interagency Standards for Fire and Aviation Operations Task Group 2004).
- Protect all known cultural resources from disturbance.
- In wilderness areas when suppression is required, use Minimum Impact Suppression Tactics (MIST) and coordinate with wilderness area management objectives and resource advisors.
- Implement general and species-specific conservation measures to the extent possible to minimize harm to federally listed, proposed, or candidate species within the action area.

Fire management will continue to avoid the physical disturbance of known archaeological sites or sites found during fire management activities. Fires will not be intentionally started at known sites. Archaeologists will serve as resource advisors for fire management and help develop and

implement fire and fuels management plans, which would address effects on cultural resources. Fire crews will be educated about the need to protect cultural resources.

BLM consulted with the State Historic Preservation Officer (SHPO) in 1993 on the effects of fire management in the Perry Mesa National Register District, in what is now Agua Fria National Monument. The two agencies agreed that emphasis will be placed on avoiding direct disturbances to archaeological sites from fire initiation, management, and suppression.

B.6. Lands and Realty Management

B.6.1. Standard Operating Procedures

Obtain reasonable public and administrative access to BLM's managed lands within the monument in the following way:

- Require reciprocal access easements to meet specific program needs.
- Secure access easements as needed to prevent closing of access to public lands.
- Consider and evaluate acquisitions that would reduce conflicts between BLM and non-Federal landowner objectives, especially when conflicts are adversely affecting BLM's ability to meet resource goals.
- Consider acquiring lands to achieve resource management objectives. Evaluate the following:
 - key wildlife habitat management areas and habitat for threatened, endangered, or sensitive species;
 - lands with streams, flood plains, wetlands, and associated riparian ecosystems;
 - land needed for visual resource protection;
 - lands needed to bring existing BLM-managed land into consolidated geographical units;
 - partial interest acquisitions, such as access, water rights or conservation easements to benefit public land management within the monument; and
 - consider public/private land management and stewardship opportunities to assist in the management of BLM's lands within the Agua Fria National Monument.

B.7. Law Enforcement

B.7.1. Standard Operating Procedures

The priorities of the law enforcement program in the monument include vandalism, illegal dumping, violations of the Archaeological Resources Protection Act, closure violations, camping limit violations, vegetative damage and theft, OHV use violations, hazardous materials incidents, and human-caused wildland fires. Law enforcement supports the safety of BLM employees, volunteers, and the public.

Law enforcement priorities are accomplished by rangers through routine patrols of high-use areas and known locations of repeated violations. Reports of violations by resource specialists and the public result in a significant portion of the investigative leads and enforcement actions by the ranger staff.

Numerous other agencies with law enforcement missions cooperate with BLM rangers on a wide variety of enforcement actions. In the area of the monument, these agencies include, but are not

limited to, the Arizona Department of Public Safety, Yavapai County Sheriff's Department, and Arizona Game and Fish Department.

B.8. Paleontological Resources

B.8.1. Administrative Actions

BLM will analyze the potential for paleontological resources and do the following:

- Develop a sensitivity map for paleontological resources and require screening for all proposed activities against potential for the project to impact vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils.
- Allocate all lands within the area to Paleontological Sensitivity Class 1, 2, 3, or 4. Formal descriptions of these classes are given in Management Decisions--Paleontological Resources, Land Use Allocations.
- When evaluating proposed actions on public lands, apply the following goals and objectives:
 - Identify areas and geological units (e.g., formations, members) containing paleontological resources.
 - Evaluate the potential of these areas to contain vertebrate fossils or noteworthy invertebrate or plant fossils.
 - Develop management recommendations (including mitigation measures in specific locations) to promote the scientific, educational, and recreational uses of fossils on public lands.
- The BLM will include paleontological resources in its cultural resources public education programs. These programs will provide information on procedures to be followed if fossilized items are found; types of fossils that cannot be collected without an applicable permit; and penalties for removing fossilized items from BLM-administered lands without a permit.
- A records search for paleontological resources will be conducted on all land use actions as appropriate. Surveys prior to, or monitoring during, ground-disturbing land uses will be conducted as necessary to protect significant paleontological values.
- Newly identified vertebrate localities will be evaluated to assess their importance and the potential threat of loss. These findings will be used to determine and implement an adequate monitoring program.

B.8.2. Standard Operating Procedures

Management of paleontological resources conforms to the provisions of the Paleontological Resources Protection Act of 2009 (Public Law 111-011) (PRPA).

The law does not change the BLM's basic policy for allowing casual collecting of reasonable amounts of common invertebrate and plant fossils from public lands for personal use without a permit. Nor does the PRPA change the prohibition on bartering or selling common invertebrate and plant fossils. Section 6301(1) of the PRPA states that casual collecting must take place "either by surface collection or the use of non-powered hand tools resulting in only negligible disturbance to the Earth's surface and other resources."

The PRPA does not change BLM's requirement for issuance of a paleontological resources use permit for the collection of vertebrate and other paleontological resources of interest by qualified

researchers. Section 6301(4) defines a paleontological resource as “...any fossilized remains, traces, or imprints of organisms, preserved in or on the earth’s crust, that are of paleontological interest and that provide information about the history of life on earth....”

For all authorized surface disturbing activities:

- Inventories will be conducted on a case-by-case basis, as deemed necessary by the authorized officer, for each proposed surface-disturbing activity to ensure maintenance or integrity of paleontological values.
- User/operators shall be responsible for informing all persons associated with a project that they shall be subject to prosecution for damaging, altering, excavating, or removing any vertebrate or noteworthy occurrences of invertebrate or plant fossils on site.
- If vertebrate or noteworthy occurrences of invertebrate or plant fossils are discovered, the user/operator shall suspend all operations that further disturb such materials and immediately contact the authorized officer.
- User/operators shall not resume until written authorization to proceed is issued by the authorized officer.
- Within five working days, the authorized officer will evaluate the discovery and inform the operator of actions that will be necessary to prevent loss of significant scientific values.
- The user/operator shall be responsible for the cost of any mitigation required by the authorized officer.
- Upon verification from the authorized officer that the required mitigation has been completed, the operator shall be allowed to resume operations.

B.9. Public Safety

B.9.1. Standard Operating Procedures

Hazardous Materials

The BLM will comply with all federal, state, and local environmental, health, and safety laws and regulations governing storage, handling, use, and disposal of hazardous materials and/or waste. BLM will minimize releases of hazardous materials, and when such materials are released into the environment, will assess their impacts on each resource and determine the appropriate response, removal, and remedial actions to take.

BLM employees or the public may encounter solid waste and hazardous materials while on BLM-administered lands. Such materials or waste may include clandestine drug lab waste, domestic solid waste dumping, and transportation accidents, including hazardous material incidents on Interstate 17 and major roads. BLM employees who may encounter such situations while in the field will be trained as mandated by the BLM and the Occupational Safety and Health Administration (OSHA) requirements to recognize, retreat, and report any discovery. The BLM will notify state and federal agencies responsible for hazardous materials or waste responses and cleanups.

Other procedures include:

- Cooperate with other agencies which have expertise or jurisdiction in efforts to remove and remediate any hazardous materials that are illegally dumped on public land. These efforts will be carried out only by adequately trained and qualified personnel or contractors.

*Appendix B Administrative Actions and Standard
Operating Procedures
Public Safety*

- Identify parties responsible for contamination who will be liable for cleanup and resource damage costs, as prescribed by law.
- Complete site-specific inventories when lands are being acquired. It is departmental policy to minimize potential liability of the Department and its bureaus by acquiring property that is not contaminated unless directed by Congress, court mandate, or as determined by the Secretary.
- Educate the public about the risks associated with waste dumping and hazardous materials through signs, bulletin boards, and/or kiosks.

Abandoned Mine Lands

- Inventory abandoned mine lands to determine old mining features that pose the greatest risk to public health and safety.
- Inspect abandoned mine land sites to identify all physical hazards presenting a safety risk to the public, and take appropriate action to mitigate any hazards and prevent public access to abandoned mine land contaminated areas.
- Where surveys indicate the potential for important bat habitat, the BLM and its partners will take appropriate actions, such as bat gates, to preserve the habitat while addressing the public hazards.
- In cases where abandoned mine land remediation actions may affect biological, cultural, or historical resources, the impacts are mitigated by recording the resources, relocating the resources, or stabilizing significant resources, consistent with reducing the threat to public health and safety. Methods of closure will vary and be identified during site-specific NEPA analysis.

B.10. Rangeland Management

B.10.1. Standard Operating Procedures

Land Health Standards

Desired plant community objectives will be quantified for each allotment through the rangeland monitoring and evaluation process. Ecological site descriptions available through the National Resource Conservation Service and other data will be used as a guide for addressing site capabilities and/or potentials for change over time. These desired plant community objectives are vegetative values that the BLM is managing over the long term. Once established, desired plant community objectives will be updated and monitored based on indicators for Land Health Standard 3. This standard is derived from the Arizona Standards for Rangeland Health, developed through a collaborative process with the Arizona Resource Advisory Council, and identifies the characteristics of and management actions needed to promote and sustain healthy ecosystems on public lands.

Monitoring studies will be used to determine conformance with the *Arizona Standards for Rangeland Health and Guidelines for Grazing Administration*. Monitoring studies generally include actual use, utilization, trend, and climate. The three management categories will be used to set priorities. These studies will be analyzed through the evaluation process to determine management actions needed to achieve standards and meet multiple-resource management objectives.

Livestock management changes may be made when sufficient assessment, inventory, or monitoring data are available.

Management actions outlined in the Arizona Standards for Rangeland Health and Guidelines for Grazing Administration will be applied to identify and correct potential erosion problems that could negatively impact other resources. Prioritized emphasis will be placed on those sites that might directly impact species that have been listed as threatened, endangered, or candidate species candidate species by USFWS.

Grazing Practices

Rest rotation, deferred rotation, seasonal or short duration use, or other grazing management systems may be implemented where the need has been identified through monitoring. Also, monitoring will be used to assess the effectiveness of changes brought about by new management practices.

Intensity, season and frequency, and distribution of grazing use should provide for growth and reproduction of the plant species needed to reach desired plant community objectives.

Consider deferment of livestock where possible in cooperation with lease and permit holders. This deferment may allow for the use of prescribed fire or other vegetative treatments, or the use of the area as a grass bank to allow for rest in other grazing allotments.

Administrative vehicular access to repair range improvements by the grazing lessee is assured through issuance of the grazing permit.

One time travel to access sick or injured livestock away from designated routes is authorized to transport the animal to a medical facility.

Any compensation for a loss of range improvements within these pastures will be made in accordance with 43 CFR 4120.3-6.

Typical Range Improvements

Following is a discussion of typical design features, construction practices, and implementation procedures for range improvements that could be constructed in a manner consistent with the protection of monument values. The extent, location, and timing of such actions will be based on allotment-specific management objectives adopted through the evaluation process, interdisciplinary development and analysis of proposed actions, and funding.

Fences

All new fences will be built to BLM manual specifications. Fences will normally be constructed to provide exterior allotment boundaries, divide allotments into pastures, protect streams or other riparian areas, and control livestock. Most fences will be three-wire or four-strand with steel posts spaced 16.5 feet apart with intermediate wire stays. Existing fences that create wildlife movement problems will be modified to facilitate movement. Proposed fence lines will usually not be bladed or scraped. Gates or cattle guards will be installed where fences cross existing roads.

Pipelines

Wherever possible, water pipelines will be buried. The trench will be excavated by a backhoe, ditch witch, or similar equipment. Plastic pipe will be placed in the trench and the excavated material will be used to backfill. Most pipelines will have water tanks spaced as needed to achieve proper livestock distribution.

Wells

Well sites will be selected based on geologic reports that predict the depth to reliable aquifers. All applicable state laws and regulations that apply to groundwater will be observed.

Supplemental Feed Authorization

Supplemental feed must be authorized in advance. Supplemental feed means a feed that supplements the forage available from the public lands and is provided to improve livestock nutrition or rangeland management.

If used, salt should be placed at least 0.25 mile from water sources to disperse impacts.

B.11. Recreation Management

B.11.1. Administrative Actions

- Encourage “Tread Lightly” and “Leave No Trace” travel and camping techniques throughout the monument.
- With free permits for camping within the monument, issue specific Leave No Trace/Tread Lightly information to minimize impacts to the resources and prevent pollution to water resources.
- Monitor the dispersed campsites and establish limits of acceptable change. Base site carrying capacities on the limits of acceptable change.
- Adopt measures to increase visitor responsibility for campfire etiquette and to reduce proliferation of campfire rings.
- Implement procedures for systematic monitoring of all sites developed or authorized for public visitation. Restrict visitor access or group tours if necessary to prevent any damage from visitor use.
- Develop and maintain partnerships and identify cooperative recreation and tourism-based economic opportunities with nearby communities.
- Develop and maintain partnerships with local clubs and organizations to help maintain and monitor motorized and non-motorized trails.
- Post applicable toll-free phone numbers on kiosks, maps, brochures, permits, and other public outreach conveyances to keep the public involved in reporting emergencies and criminal activities, including damage to the monument’s resources.
- Require that holders of Special Recreation Permits (SRPs) give site visitors suitable educational information on archaeological site etiquette and resource conservation.
- SRP applicants will be strongly encouraged to have a working knowledge of Leave No Trace and Tread Lightly principles. Additionally, applicants will be asked to incorporate Leave No Trace and Tread Lightly principles into their tour, program, or event activities.
- Pursue interpretation and environmental educational opportunities, outreach development, and implementation of on-site and off-site programs for adults and children.

- Establish a repository of photographs and images that will illustrate BLM's mission for the National Landscape Conservation System, including digital photographs and slides for program design.
- Apply learning modalities and incorporate various learning styles in program design and delivery.
- Encourage the use of multiple intelligence or other theories for program presentations.
- Develop school curricula focusing on the Agua Fria NM, by cooperating with educators from schools, school districts, and other learning institutions.
- Support existing educational and interpretive programs and initiatives such as Project Archaeology, Leave No Trace, Tread Lightly, Project Learning Tree, and other proven national, State, regional, and local programs.
- Develop websites and distribute brochures, maps, access guides, and information sheets to provide information on recreational opportunities, interpreted sites, resource protection, designated trails and travel routes, safe travel, and safe shooting practices.
- Cooperate with local museums and organizations to develop displays and exhibits featuring scientific research within the monument.

B.12. Standard Operating Procedures

The BLM will provide law enforcement rangers to protect natural and cultural resources and help provide for public health and safety.

The BLM will strive to make available staff members to provide visitor services, interpretive programs and maintain an agency presence within the monument. Volunteers and partners, such as the Friends of the Agua Fria National Monument, may provide assistance with interpretive programs and visitor contacts.

To the greatest extent possible, all new construction and modifications for recreation facilities, outdoor developed areas, and any related programs and activities will be accessible to people with disabilities in accordance with the Architectural Barriers Act of 1968 and Section 504 of the Rehabilitation Act of 1973, with later amendments. Guidance, requirements, and standards applicable to conform to the above legislation may be found in the following :

Uniform Federal Accessibility Standards.

Americans with Disabilities Act (ADA) Accessibility Guidelines.

ADA-ABA Accessibility Guidelines (use whichever guidance is most stringent).

Proposed Outdoor Developed Areas Guidelines-U.S. Access Board found at www.access-board.gov and 43 CFR Part 17, Subpart E found at <http://www.gpoaccess.gov/cfr/index.html>.

Special Recreation Permits

Special Recreation Permits (SRPs) are authorizations allowing specific recreation uses of public lands and related waters. SRPs are issued to manage visitor use and protect natural and cultural resources while avoiding user conflicts. The legal authorities are the Federal Land Policy and Management Act, 43 USC 1701 *et seq.*, and the Land and Water Conservation Fund Act, as amended, 16 USC 460l-6a. BLM Handbook H-2930-1 Recreation Permit Administration application process contains applicable laws, policy, rules and regulations and conformance with

*Appendix B Administrative Actions and Standard
Operating Procedures
Standard Operating Procedures*

resource planning decisions. The decision to authorize a proposed use depends on potential resource impacts, conflicts with other users, any public health and safety issues, past or present performance of the applicant with the BLM or other agencies, and BLM receiving a complete SRP application in a timely manner to process and administer the permit.

Types of Permits

1. Commercial Use: recreational use of the public lands and related waters for business or financial gain.
2. Competitive Use: any organized sanctioned or structured use, event or activity on public land and related waters in which two or more participants compete and (a) participants register, enter and/or complete an application; (b) a predetermined course or area is designated; or (c) participants contest an established record such as speed or endurance.
3. Organized group activity or event: a structured, ordered, consolidated, or scheduled event or occupation of public lands for recreational purposes not considered commercial or competitive.
4. Vending Use: use permitted to market, sell, or rent recreation-related goods or services including but not limited to, food, beverages, clothing, firewood, tool or equipment repair on public lands or related waters.

Some commercial and organized group uses requiring Special Recreation Permits (SRPs) have little to no resource impacts, user conflicts, or health and safety concerns, and may require little monitoring. Examples of such uses are hunting outfitter and guide operations, motorized tours, photography tours, nature hikes, dual-sport rides, horseback rides, and organized club campouts. Special stipulations for SRPs have been developed to protect natural resources, reduce user conflicts, and minimize health and safety risks. These stipulations are included with all authorized SRPs and must be followed to keep the permit valid. Final decisions for permit issuance will be based on other valid concerns, including the following:

- performance;
- other conflicting activities such as hunting seasons
- the BLM's ability to process the permit
- other unforeseen circumstances.

The permittee must also comply with any special allocations or restrictions. Proposed SRPs are subject to environmental analysis in accordance with NEPA.

Standards for Recreation Settings

Standards for Recreation Settings referred to in this document are as follows:

Recreation Settings - Settings described in the recreation opportunity spectrum (ROS) inventory method. Descriptions of the settings follow:

Primitive Settings:

Remoteness: An area designated by a line generally three miles from all open roads, railroads, and motorized trails. Evidence of Humans: Setting is essentially an unmodified natural environment.

Evidence of humans would be unnoticed by an observer wandering through the area.

Evidence of trails is acceptable but should not exceed standard to carry expected use.

Structures are extremely rare.

Social: Usually less than six parties per day encountered on trails and less than three parties visible at campsites.

Managerial: Onsite regimentation is low with controls primarily offsite.

Semi-primitive Non-motorized Settings:

Remoteness: An area designated by a line generally 1/2 mile from any road, railroad, or trail open to public motorized use. (The guideline for applying the 1/2 mile criterion is to use 1/2 mile except where topographic or physical features closer than 1/2 miles adequately screen out the sights and sounds of humans and make access more difficult and slower. For example, if a ridge is 1/4 mile from the road, use the ridge instead of the 1/2 mile.)

Any roads, railroads, or trails within the semi-primitive non-motorized areas will have the following characteristics:

- Closed to public motorized use, and
- Are reclaimed, or in the process of reclaiming (when reclaiming will harmonize with the natural appearing environment). Some examples are old logging roads, old railroad beds, old access routes to abandoned campsites, temporary roads, and gated roads that are used for occasional administrative access.

Evidence of Humans: Natural setting may have subtle modifications that would be noticed but not draw the attention of an observer wandering through the area.

Little or no evidence of primitive roads and the motorized use of trails and primitive roads.

Structures are rare and isolated.

Social: Usually 6-15 parties per day encountered on trails and six or fewer parties visible from campsite.

Managerial: Onsite regimentation and controls present but subtle.

Semi-Primitive Motorized Settings:

Remoteness: An area designed by a line generally 1/2 mile from open primitive roads. (The guideline for applying the 1/2 mile criterion is to consistently use 1/2 mile where topographic or physical features closer than 1/2 mile adequately screen out the sights and sounds of humans, e.g. a ridge 1/4 mile from the road.)

Contains open primitive roads that are not maintained for the use of standard passenger-type vehicles, normally OHVs and high-clearance vehicles, e.g. an old pickup with high clearance. These open roads are generally tracks, ruts,

or rocky-rough surface and ungraded and not drained. The roadbeds and cuts are mostly vegetated with grass or native material unless they are too rocky for vegetation. The roads harmonize with the natural environment. Examples include old logging roads from before specified road years, old revegetated railroad beds, old access roads to abandoned home-sites, temporary logging roads that are revegetated, and low standard administrative roads (normally used for access to wildlife openings).

Evidence of Humans: Natural setting may have moderately dominant alterations but would not draw the attention of motorized observers on trails and primitive roads within the area. Any closed improved roads must be managed to revegetate and harmonize with the natural environment.

Strong evidence of primitive roads and the motorized use of trails and primitive roads.

Structures are rare and isolated.

Social: Low to moderate contact frequency.

Managerial: Onsite regimentation and controls present but subtle.

Roaded Natural Settings:

Remoteness: No criteria

Evidence of Humans: Natural setting may have modifications, which range from being easily noticed to strongly dominant to observers within the area. But from sensitive travel routes and use areas, these alterations would remain unnoticed or visually subordinate.

There is strong evidence of designed roads, highways, or both.

Structures are generally scattered, remaining visually subordinate or unnoticed to the sensitive travel route observer. Structures may include utility corridors or microwave installations.

Social: Frequency of contact is - Moderate to high on roads; Low to Moderate on trails and away from roads.

Managerial: Onsite regimentation and controls are noticeable but harmonize with the natural environment.

Rural Settings:

Remoteness: No criteria

Evidence of Humans: Natural setting is culturally modified to the point that it is dominant to the sensitive travel route observer. This setting may include pastoral, agricultural, intensively managed wildland resource landscapes, or utility

corridors. Pedestrian or other slow-moving observers are constantly within view of culturally changed landscape.

There is strong evidence of designed roads, highways, or both.

Structures are readily apparent and may range from scattered to small dominant clusters, including utility corridors, farm buildings, microwave installations, and recreation sites.

Social: Frequency of contact is - Moderate to High developed sites, on roads and trails, and water surfaces; Moderate away from developed sites.

Managerial: Regimentation and controls obvious and numerous, largely in harmony with the human-made environment.

Urban Settings:

Remoteness: No criteria

Evidence of Humans: Setting is strongly structure dominated. Natural or natural appearing elements may play an important role but be visually subordinate. Pedestrian and other slow moving observers are constantly within view of artificial enclosure of spaces.

There is strong evidence of designed roads and/or highways and streets.

Structures and structure complexes are dominant.

Social: Large numbers of users onsite and in nearby areas.

Managerial: Regimentation and controls obvious and numerous

Implementation: Projects requiring environmental analysis will include an analysis to determine compatibility or consistency with the settings as described above. This analysis will be conducted consistent with current accepted practice and documented in the project record.

B.13. Soil and Water Resources

B.13.1. Administrative Actions

- Collaborate with State and local entities to protect the quality and quantity of surface and subsurface water in the monument.
- Develop and implement a water quality/quantity monitoring program to establish baseline data needed to quantify the Federal reserved water right for the monument. Monitoring may include the following:
 - periodic measurements of spring and stream flows,
 - periodic measurements of water levels in selected wells, and
 - systematic sampling and water quality analysis of surface water throughout the monument.

*Appendix B Administrative Actions and Standard
Operating Procedures
Soil and Water Resources*

B.13.2. Standard Operating Procedures

Watershed Management

FLPMA defines the BLM's mission to include protection of watersheds. FLPMA requires that public lands be managed to protect scientific, environmental, air and atmospheric, and water resources. FLPMA also requires that BLM land use plans comply with state and federal air, water, and pollution standards. In addition, BLM Manual 7000 and executive orders provide field guidance in managing soil, water, and air.

Management is done in compliance with these and other relevant laws:

- Soil Conservation and Domestic Allotment Act of 1935
- Watershed Protection and Flood Control Act of 1954
- Wild and Scenic Rivers Act of 1968
- Federal Pollution Control Act with amendments of 1972
- Clean Water Act of 1989
- Safe Drinking Water Act of 1977

Water Resource Management Program

The BLM's water resource program consists of the following mandates:

- To ensure the physical presence and legal availability of water on public lands.
- To ensure that those waters meet or exceed federal and state water quality standards for specific uses.
- To mitigate activities to prevent water quality degradation.

The water resource program is divided into three parts: water inventory, water rights, and monitoring.

BLM policy is to inventory all water resources on public lands it administers and to document and store this data in its Water Data Management System; and to file for water rights on all water sources on public and acquired lands in accordance with State of Arizona water laws.

BLM policy is to monitor water quality to assess resource impacts from specific activities and to obtain baseline resource information.

B.14. Special Designations

B.14.1. Administrative Actions

- Monitor instream flow to establish the minimum flow necessary to protect the outstandingly remarkable values of the Agua Fria River that make it suitable for designation to the national Wild and Scenic Rivers System.
- Continue to work with partners, such as the Friends of the Agua Fria National Monument, Audubon Society, and Arizona Site Stewards, to monitor, inventory, and protect outstandingly remarkable river values.
- The BLM will evaluate the suitability of each eligible segment of the Agua Fria tributary streams for inclusion in the national Wild and Scenic Rivers System. The public will have

opportunities to comment on the proposed suitability determinations. Suitability evaluations will be completed within four years after the Record of Decision for the RMP is signed.

B.15. Travel Management

B.15.1. Administrative Actions

- Improve legal access to public lands by identifying access needs across non-federal lands and recommend acquisition and funding strategies.
- Provide reasonable access to private inholdings surrounded by public lands.
- Be consistent with the Americans with Disabilities Act and develop greater access for the physically challenged.
- Set guidelines for managing roads and trails to protect resource values, promote public safety, and improve public compliance on designated routes.
- Develop monitoring procedures sufficient to detect and evaluate related public safety or natural resource impacts so that management changes could occur, if needed.
- Create an implementation schedule for the Travel Management Plan that must cover public education, mapping, signing of designated trails and routes, rehabilitation of closed routes, law enforcement, and maintenance.
- Incorporate the effective use of volunteers to provide “on the ground” information and route marking/signing for the public.
- Increase public involvement in the establishment, monitoring, and protection of routes/trails on public lands.
- Set timelines for monitoring and plan review.

B.15.2. Standard Operating Procedures

Restoration of Closed Routes

The BLM’s strategy for restoring closed routes or trespasses will be accomplished as rapidly as funding permits. Sensitive resources in immediate danger or those that have been damaged by vehicle trespass would be a high priority for restoration. Typically, the restoration will be limited to that portion of the route or trespass that is in line of sight from an open route. The proposal for restoration will include:

- Not repairing washed-out routes.
- Using natural barriers, such as large boulders.
- Using rocks and dead and down wood to obscure the route entryway.
- Employing vertical mulching and pitting.
- Ripping up the route bed and reseeding with vegetation natural to that area.
- Utilizing fences or barriers.
- Providing signage, including information to OHV users, on the need and value of resource protection.

Each route will be evaluated, and the least intrusive method will be used based on local topography, soils, hydrology, and vegetation; and protection of natural and cultural resources.

Overflights

Aircraft overflights, including low-level helicopter and fixed-wing overflights by other agencies, and other use of the airspace over public lands, are not regulated by the BLM. These uses occur now and would continue.

B.16. Visual Resource Management

B.16.1. Administrative Actions

Cooperate with surrounding communities and national, State, regional, and local entities to minimize the impacts of lighting.

Include clear nights from light standards in new permits/authorizations and in renewing permits/authorizations within all the viewsheds affecting the monument.

B.16.2. Standard Operating Procedures

VRM Class objectives will help the BLM apply visual design techniques to ensure that surface-disturbing activities are in harmony with their surroundings. A visual contrast rating process will be used for analysis, which involves comparing the project features with the major features in the existing landscape using the basic design elements of form, line, color, and texture. Visual design consideration will be incorporated into all surface-disturbing projects regardless of size or potential impact. Emphasis is placed on the BLM providing inputs during the initial planning and design phase to minimize costly redesign and mitigation at later phases of a project. The overall goal of VRM analysis is to minimize visual impacts through development of mitigating measures.

The BLM will analyze all proposed activities and projects according to the guidelines and procedures provided in BLM Manual 8431-1, Visual Resource Contrast Rating. Visual simulations could be used in evaluating the visual resource effects of a project. These projects will be assessed for the degree of visual contrast from the landscape using the elements of form, line, color, and texture. Proposed projects may be evaluated from Key Observation Points for the following factors:

1. distance (project from Key Observation Points)
2. angle of observation
3. length of time the proposed project would be in view
4. relative size or scale
5. season of use
6. light conditions
7. recovery time
8. spatial relationships
9. atmospheric conditions
10. motion

B.17. Wilderness Characteristics

B.17.1. Administrative Actions

- Sites and areas affected by human activities will be reclaimed when such locales or sites are no longer needed by authorized land uses.
- A permit system would be applied, if needed, for the following purposes:
 - to conserve solitude and primitive recreation opportunities,
 - to preserve desired social and managerial settings,
 - to safeguard resources, and
 - to mitigate resource impacts.

Any permit system would include coordination with other State and Federal entities that issue use permits on Federal lands to assure that authorized permittees have fair and reasonable access to their permitted activity. For example, should a permit system be implemented, BLM will coordinate with AGFD to allow access for hunters with valid hunting licenses.

- Develop and adopt measurement standards for limits of acceptable change for the following:
 - trail conditions,
 - visitor-to-visitor encounters,
 - vegetation changes,
 - applying Arizona Land Health Standards, and
 - approved motorized and mechanized activities.

Appendix C. Travel Management Plan

The Agua Fria National Monument Travel Management Plan (TMP) was developed as part of this ARMP. Since the TMP is an activity plan document rather than put the content of the TMP here it is published as it's own document under Activity Plans of the Agua Fria National Monument RMP web page.

Appendix D. List Of Preparers

Table D.1. List Of Preparers

Name	Education	Role
Steven Cohn	Ph.D., Wildland Resource Science	Field Manager; Hassayampa Field Office
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Connie Stone	Ph.D., Anthropology	Cultural Resources; Planning Team Leader 2007-2009
Rem Hawes	B.A., Communications	Agua Fria National Monument Manager
Tim Hughes	B.S., Wildlife Biology	Biological Resources
Penny Foreman	B.S., Recreation and Tourism Management	Recreation
Pamela Mathis	A.A., Political Science	External Affairs
Mary Skordinsky	M.A., Recreation	Recreation
Dave Eddy	B.S., Geology	Mineral Resources
Clay Templin	B.S., Range Management	Rangeland Management
Matt Plis	M. Eng. , Mining Engineering	Mineral Resources
Helen Graham	B.S., Biology	Fire Management
Bill Crollly	A.S., Forestry	Fire Management

James Maes	B.S., Mechanical Engineering	Hazardous Materials and Air Quality
Jim Andersen	B.S., Natural Resource Management	Lands and Realty
JoAnn Goodlow	M.A., Project Management	Lands and Realty
Lin Fehlmann	B.S., Secondary Education	Water Rights
Tom Bickauskas	B.S., Manufacturing Engineering Technology	Transportation Management
Jameson Belke	B.S.,	Geographic Information Systems
J. A. Vacca	B.S., Biology and Chemistry	Biological Resources

Appendix E. Maps for the Agua Fria National Monument Approved Resource Management Plan

Map 1. Agua Fria National Monument — Special Area Designations and National Register District

Map 2. Agua Fria National Monument / Bradshaw- Harquahala Planning Area — Tortoise Habitat

Map 3. Agua Fria National Monument — Pronghorn Fawning Habitat & Movement Corridors

Map 4. Agua Fria National Monument — Special Cultural Resource Management Areas

Map 5. Agua Fria National Monument / Bradshaw- Harquahala Planning Area — Fire Land Use Allocation

Map 6. Agua Fria National Monument — Grazing Allotments

Map 7. Agua Fria National Monument — Resource Management Zones & Wilderness Characteristics

Map 8. Agua Fria National Monument — Streams Eligible for Study as Wild & Scenic Rivers

Map 9. Agua Fria National Monument — Designated Route Network

Map 10. Agua Fria National Monument / Bradshaw- Harquahala Planning Area — Visual Resource Management

Index

- A -

AC-1, 58
 ACEC, 5, 6, 31, 58, 71, 80, 96, 102
 acquiring non-Federal lands, 45
 acquisition, 29, 45, 45, 88, 101, 115, 118, 131, 131, 143
 adaptive management, 11, 12, 25, 54, 59, 68, 69, 70, 70, 70
 AGFD (see Arizona Game and Fish Department)
 Agua Fria National Monument / Bradshaw- Harquahala Planning Area — Fire Land Use Allocation Map, 151
 Agua Fria National Monument / Bradshaw- Harquahala Planning Area — Tortoise Habitat Map, 151
 Agua Fria National Monument / Bradshaw- Harquahala Planning Area — Visual Resource Management Map, 151
 Agua Fria National Monument — Designated Route Network Map, 151
 Agua Fria National Monument — Grazing Allotments Map, 151
 Agua Fria National Monument — Pronghorn Fawning Habitat & Movement Corridors Map, 151
 Agua Fria National Monument — Resource Management Zones & Wilderness Characteristics Map, 151
 Agua Fria National Monument — Special Area Designations and National Register District Map, 151
 Agua Fria National Monument — Special Cultural Resource Management Areas Map, 151
 Agua Fria National Monument — Streams Eligible for Study as Wild & Scenic Rivers Map, 151
 air quality, 29, 29, 38, 40, 40, 40, 56, 60, 75, 79, 82, 82, 94, 117, 117, 117, 117, 117, 150
 allotment, 38, 47, 47, 47, 48, 49, 55, 71, 71, 79, 79, 89, 89, 134, 135, 135, 135, 135
 Alternative C, 2
 aquatic habitats, 80
 Arizona Game and Fish Department, 29, 30, 66, 71, 118, 132
 (see also AGFD)
 Arizona Game and Fish Department (AGFD), 10, 10, 21, 22, 22, 22, 22, 22, 31, 32, 32, 32, 32, 32, 41, 66, 66, 118, 119, 119, 119, 121, 121, 121, 121, 121, 122, 122, 122, 122, 145
 Arizona Standards for Rangeland Health, 11, 42, 47, 47, 48, 48, 48, 56, 80, 134, 134, 135

- B -

Back Country Recreation Management Zone (RMZ) (see Back Country RMZ)
 Back Country RMZ, 2, 50, 51, 51, 51, 52, 52, 56, 61, 61, 63, 64, 64
 Badger Springs, 3, 35, 47, 55, 55, 55, 55, 55, 55, 63
 Bloody Basin Road, 2, 18, 35, 55, 57, 57, 57, 57, 60, 60, 61, 62, 129

- C -

camping, 51, 52, 53, 53, 53, 53, 53, 53, 53, 53, 56, 65, 101, 107, 131, 136, 136
 casual use, 46, 46, 82, 82
 CL-1, 34
 CL-10, 36
 CL-11, 36
 CL-12, 36
 CL-13, 36
 CL-14, 36

CL-15, 36
 CL-16, 36
 CL-17, 36
 CL-18, 36
 CL-19, 37
 CL-2, 34, 37
 CL-21, 37
 CL-22, 37
 CL-23, 37
 CL-24, 37
 CL-25, 38
 CL-3, 35
 CL-4., 35
 CL-5, 35
 CL-6, 35
 CL-7, 35
 CL-8, 35
 CL-9, 35
 commercial filming, 53, 53, 53
 concession leases, 54, 54, 66
 critical habitat, 23
 (see also habitat)

- D-

desert bighorn sheep, 31
 desert pupfish, 27, 27, 29, 29, 29, 29, 30, 31, 118, 118, 118, 119, 119
 desert tortoise, 26, 26, 27, 27, 28, 28, 28, 29, 29, 31, 31, 85, 115, 118, 118, 118, 118, 118, 118, 118
 desert tortoise habitat, 26, 26, 31, 85, 118, 118, 118, 118, 118, 118, 118, 151
 (see also habitat)
 designated routes, 6, 32, 48, 58, 58, 59, 59, 59, 60, 60, 62, 65, 65, 66, 66, 80, 129, 135, 143
 Desired Future Conditions, 1, 5, 5, 5, 5, 5, 6, 12, 12, 17, 25, 25, 25, 26, 30, 31, 33, 34, 38, 42, 44,
 46, 47, 50, 50, 52, 52, 56, 57, 58, 61, 61, 63, 64, 65, 67, 70, 122
 disposal, 46, 93, 96, 133

- E-

endangered species, 73, 80, 81, 81, 87
 (see also threatened or endangered species)
 environmental education, 136

- F-

fawning area, 33, 55
 Fire Management Plan, 39, 39, 41, 41, 41, 73, 88, 130, 130
 fire suppression, 39, 41, 41, 41, 41, 88, 88, 118, 119, 119, 119, 130, 130, 130
 fish habitat, 26
 (see also habitat)
 FM-1, 38
 FM-10, 40
 FM-11, 40
 FM-12, 40
 FM-13, 40

FM-14, 40
 FM-15, 40
 FM-16, 40
 FM-17, 40
 FM-18, 40
 FM-19, 41
 FM-2, 38
 FM-20, 41
 FM-21, 41
 FM-22, 41
 FM-23, 41
 FM-24, 42
 FM-25, 42
 FM-26, 42
 FM-3, 38
 FM-4, 38
 FM-5, 38
 FM-6, 38
 FM-7, 39
 FM-8, 39
 FM-9, 39
 forage, 79, 79, 80, 87, 87, 88, 89, 92, 99, 100, 107, 107, 136
 fossil, 46, 46, 46, 46, 46, 46, 47, 126, 132, 132, 132, 132, 132, 132, 132, 133, 133
 Front Country RMZ, 2, 6, 50, 50, 50, 50, 50, 51, 55, 61, 62, 64, 64
 Front Country RMZ), 51
 fuels management, 33, 41, 131
 fuels reduction, 34, 124

- G-

geocaching, 52
 Gila chub, 27, 27, 29, 29, 29, 29, 30, 31, 115, 118, 118, 118, 118, 119, 119
 Gila topminnow, 27, 27, 29, 29, 29, 29, 29, 30, 31, 118, 118, 118, 118, 119, 119
 GL-1, 46
 GL-2, 46
 GL-3, 46
 GL-4, 47
 GL-5, 47
 GM-1, 47
 GM-10, 48
 GM-11, 48
 GM-12, 48
 GM-13, 48
 GM-14, 48
 GM-15, 48
 GM-16, 48
 GM-17, 48
 GM-18, 48
 GM-19, 49
 GM-2, 47

- M-

- N -

- P-

- Q-

- R-

Index
Administrative Actions

RR-19, 52
RR-2, 50
RR-20, 52
RR-21, 52
RR-22, 52
RR-23, 52
RR-24, 52
RR-25, 53
RR-26, 53
RR-27, 53
RR-28, 53
RR-29, 53
RR-3, 50
RR-30, 53
RR-31, 53
RR-32, 53
RR-33, 53
RR-34, 54
RR-35, 54
RR-36, 54
RR-37, 54
RR-38, 54
RR-39, 54
RR-4, 50
RR-40, 54
RR-41, 54
RR-42, 54
RR-43, 54
RR-5, 50, 55
RR-51, 55
RR-52, 55
RR-53, 55
RR-54, 55
RR-55, 55
RR-56, 55
RR-58, 55
RR-59, 55
RR-6, 50
RR-60, 55
RR-61, 56
RR-62, 56
RR-63, 56
RR-64, 56
RR-7, 50
RR-8, 50
RR-9, 51

- S-

Special Recreation Permits (SRP), 28, 36, 37, 53, 53, 54, 54, 54, 54, 54, 54, 54, 54, 55, 55, 77, 82, 105, 136, 136, 137, 138, 138, 138, 138, 138
SRP (see Special Recreation Permits)

- T-

TE-1, 26
TE-10, 28
TE-11, 28
TE-12, 28
TE-13, 29
TE-14, 29
TE-15, 29
TE-16, 29
TE-17, 29
TE-18, 29
TE-19, 29
TE-2, 27
TE-20, 30
TE-21, 30
TE-22, 30
TE-23, 30
TE-3, 27
TE-4, 27
TE-5, 27
TE-7, 27
TE-8, 27
TE-9, 27
TE-6, 27
threatened or endangered species, 29, 29, 29, 31, 45, 80, 81, 93, 118, 120
TM-1, 58
TM-10, 59
TM-11, 59
TM-12, 59
TM-13, 59
TM-14, 59
TM-15, 60
TM-16, 60
TM-17, 60
TM-18, 60
TM-19, 60
TM-2, 58
TM-20, 60
TM-21, 60
TM-22, 60
TM-23, 60
TM-24, 60
TM-25, 60
TM-26, 60

TM-27, 61
 TM-28, 61
 TM-29, 61
 TM-3, 59
 TM-30, 61
 TM-31, 61
 TM-32, 61
 TM-33, 61
 TM-34, 61
 TM-35, 61
 TM-36, 61
 TM-37, 61
 TM-38, 62
 TM-39, 62
 TM-4, 59
 TM-40, 62
 TM-41, 62
 TM-42, 62
 TM-43, 62
 TM-44, 62
 TM-45, 62
 TM-46, 62
 TM-47, 62
 TM-48, 62
 TM-49, 63
 TM-5, 59
 TM-50, 63
 TM-51, 63
 TM-6, 59
 TM-7, 59
 TM-8, 59
 TM-9, 59
 Tonto National Forest, 10, 18, 18, 21, 37, 60, 122, 128, 129, 129
 tortoise habitat, 27, 28, 28, 28, 28, 28, 28, 28, 28, 28
 (see also habitat)

- V -

Visual Resource Management (VRM), 59, 63, 64, 64, 64, 64, 64, 64, 64, 64, 64, 66, 78,
 108, 108, 144, 144
 VM-1, 33
 VM-10, 34
 VM-2, 33
 VM-3, 33
 VM-4, 33
 VM-5, 34
 VM-6, 34
 VM-7, 34
 VM-8, 34
 VM-9, 34

VR-1, 63
VR-10, 64
VR-11, 65
VR-2, 64
VR-3, 64
VR-4, 64
VR-5, 64
VR-6, 64
VR-7, 64
VR-8, 64
VR-9, 64

- W-

water quality, 24, 44, 56, 89, 91, 99, 107, 119, 141, 141, 142, 142, 142
watersheds, 30, 30, 33, 38, 49, 79, 94, 95, 95, 109, 109, 109, 109, 118
WC-1, 65
WC-10, 66
WC-11, 66
WC-12, 66
WC-13, 66
WC-14, 66
WC-15, 66
WC-16, 66
WC-2, 65
WC-3, 65
WC-4, 65
WC-5, 65
WC-7, 65
WC-8, 66
WC-9, 66
WF-1, 30, 31
WF-10, 31
WF-11, 32
WF-12, 32
WF-13, 32
WF-14, 32
WF-15, 32
WF-16, 32
WF-17, 32
WF-18, 32
WF-19, 32
WF-2, 31, 33
WF-20, 32
WF-21, 32
WF-22, 33
WF-23, 33
WF-25, 55
WF-26, 33
WF-27., 33

WF-3, 31
WF-4, 31
WF-5, 31
WF-6, 31
WF-7, 31
WF-8, 31
WF-9, 31
Wild and Scenic Rivers, 18, 19, 57, 57, 57, 57, 57, 57, 57, 57, 78, 86, 142, 142, 142
wilderness characteristics, 2, 3, 5, 6, 19, 64, 65, 65, 65, 66, 66, 107
wildland fire use, 38, 39, 39
Wildland Urban Interface (WUI), 38
 (see also WUI)
wildlife habitat, 3, 6, 10, 22, 22, 26, 28, 29, 31, 31, 31, 32, 32, 33, 33, 38, 78, 90, 104, 118, 118,
119, 119, 119, 119, 119, 121, 121, 121, 122, 122, 125, 131
 (see also habitat)
wildlife waters, 32, 32, 32, 32, 32, 66, 122
WR-1, 57
WR-10, 58
WR-2, 57
WR-3, 57
WR-4, 57
WR-5, 58
WR-6, 58
WR-7, 58
WR-8, 58
WR-9, 58
WS-1, 56
WS-2, 56
WS-3, 56
WS-4, 56
WS-5, 56
WS-6, 56
WS-7, 56
WS-8, 56
WUI, 39, 39, 78, 110